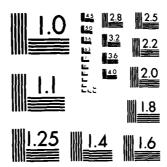
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No. 57

JANUARY - FEBRUARY 1982

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### O. ABSTRACT

This is the Soviet Laser Bibliography for January-February 1982, and is No. 57 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials, ultrashort pulse generation; crystal growing, theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; computer technology; holography, laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; laser spectroscopy; beam-target interaction; and plasma generation and diagnostics.

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## Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is January-February 1982, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are also included. Laser items from the popular or semipopular press are generally omitted.

For convenience we have abbreviated frequently cited source names; a source abbreviations list and an author index are included. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry (RZh, KL) indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library. The authors' affiliations are indicated by the numbers in parentheses following the authors' names in the text and are listed in the Author Affiliations List. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's Author Affiliations List.

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## I. BASIC RESEARCH

### A. SOLID STATE LASERS

### 1. Crystal: Ruby

- 1. Kovalenko, Ye.S., V.A. Laptev, and G.I. Latukhin (0). Characteristics of a c-w ruby laser. Sb 1, 141-144. (RZhRadiot, 1/82, 1Ye68)
  - 2. Crystal: Rare-Earth Activated
- a. Nd<sup>3+</sup>
- Golikova, S.N., P.S. Gusev, V.A. Zhukov, V.G. Nikiforov, S.M.
   Pechenegov, and B.F. Trinchuk (0). Research and development of a pump system for Nd:YAG using the radiation from a high-frequency electrodeless discharge. KE, no. 2, 1982, 376-377.
- 3. Varnavskiy, O.P., A.M. Leontovich, A.A. Loktyushin, I.A. Parfianovich, B.V. Salamatin, Yu.M. Titov, V.M. Khulugurov, and V.P. Shevchenko (1).
  Self mode-lock in Nd:YAG and ruby lasers using alkali halide crystals
  with color centers as saturable absorbers. ZhTF P, no. 2, 1982, 65-69.
- Varnavskiy, O.P., A.V. Larikov, and A.M. Leontovich (1). <u>Coherent</u>
   <u>amplification of light in Nd:YAG at a temperature of 100 K.</u>

   Fizicheskiy institut AN SSSR. Preprint, no. 112, 1981, 5 p.
   (RZhF, 2/82, 2D1416)

## 3. Crystal: Miscellaneous

- Ageyev, G.V., R.P. Bashuk, A.S. Bebchuk, V.A. Luk'yantsev, A.A.
   Chesnokov, and V.D. Shargorodskiy (0). <u>Laser</u>. Otkr izobr, no. 8, 1982, 313498.
- Ageyev, G.V., V.A. Ashenmil', R.P. Bashuk, A.S. Bebchuk, D.A. Gromov, T.N. Dunayeva, Ye.A. Kolenko, V.A. Makeyev, L.P. Sorokina, and A.V. Chesnokov (0). <u>Attachment fitting for a solid state laser</u>.
   Otkr izobr, no. 8, 1982, 371847.
- 7. Dzhibladze, M.I., L.Ye. Lazarev, and E.Sh. Teplitskiy (40). Effect of instability of field distribution on the lasing kinetics of a laser. Tr 1, 95-113. (RZhF, 1/82, 1D1394)
- 8. Kaminskiy, A.A., S.E. Sarkisov, V.V. Ryabchenko, A.Z. Arakelyan, K.B. Seyranyan, and R.O. Sharkhatunyan (13,521). Growth and laser properties of CaF<sub>2</sub>-HoF<sub>3</sub> and CaF<sub>2</sub>-ErF<sub>3</sub> crystals. Kristal, no. 1, 1982, 193-195.
- 9. Kirillov, Yu.F., and S.N. Konoplin (159). Study of a laser using electron-vibrational transitions in an MgF<sub>2</sub>:Ni<sup>2+</sup> crystal. Sb 2, 124-128.
- 10. Murin, I.V., O.V. Glumov, I.G. Podkolzina, M.A. Petrova, and B.P. Sobolev (0). Ion migration in single-crystal tisonite phases of SrF,-(Y,Ln)F<sub>3</sub>. Zhurnal prikladnoy khimii, no. 2, 1982, 300-303.

- 11. Szymanski, M., J. Karolczak, and F. Kaczmarek (NS). <u>Temporal studies</u>
  of intensity dependent laser and spontaneous emission in NdLaP<sub>5</sub>O<sub>14</sub>
  single crystals. APP, v. A6O, no. 1, 1981, 95-107. (RZhF, 2/82, 2D1486)
- 12. Voskresenskaya, Ye.N., Yu.F. Kargin, V.M. Skorikov, and V.V.

  Konstantinov (18). Defects in single crystals of compounds with a sillenite type structure. NM, no. 1, 1982, 102-106.

### 4. Semiconductor

- a. InP
- Ismailov, I. (1). <u>Laser radiation and luminescence from InP and solid solutions based on it</u>. Fizicheskiy institut AN SSSR.
   Dissertation, 1981, 27 p. (KLDVAD, 1/82, 411)
- b.  $Pb_{1-x}Sn_xTe$
- 14. Kolezhuk, K.V., T.A. Kudykina, I.A. Samoylova, P.M. Starik, G.A.
  Fedorus, and Yu.G. Yurov (6). <u>Transfer effects in Pb<sub>1-x</sub>Sn<sub>x</sub>Te layers</u>.
  UFZh, no. 1, 1982, 95-101.
- 15. Kurbatov, A.L., N.D. Polchkova, O.G. Romanov, M.V. Shubin, and M.V.

  Bestayev (0). Time lag for stimulated emission in Pb Sn Te lasers.

  FTP, no. 2, 1982, 356-357.

## c. Heterojunction

- 16. Akhmedov, D., V.I. Kuchinskiy, V.A. Mishurnyy, Ye.L. Portnoy, and E.V. Russu (0). Low-threshold InGaAsP-InP heterolaser for the 1.5 1.6 um spectral region. ZhTF P, no. 4, 1982, 236-240.
- 17. Bogatov, A.P., P.G. Yeliseyev, M.A. Man'ko, and G.T. Mikayelyan (1).
  Model of a planar heterolaser, allowing for inhomogeneities in complex dielectric permittivity along the length of the resonator.
  Fizicheskiy institut AN SSSR. Preprint, no. 101, 1981, 44 p.
  (RZhF, 1/82, 1D1401)
- 18. Gurevich, S.A., Ye.L. Portnoy, N.V. Pronina, and V.I. Skopina (4).
  Efficient monolithic hybrid injection heterolaser junctions with film waveguiding from chalcogenide glass. ZhTF P, no. 4, 1982, 193-197.
- 19. Karikh, Ye.D., and A.F. Shilov (0). <u>Inertial properties of GaAlAs</u> heterolasers. Sb 3, 70-73. (RZhRadiot, 2/82, 2Ye160)
- 20. Osinski, M. (NS). <u>Properties of transverse modes in the Epstein-layer</u>

  <u>model of broad-contact heterojunction lasers</u>. APP, v. A60, no. 1,

  1981, 109-121. (RZhF, 2/82, 2D1494)
- 21. Ruehle, W., and P. Brosson (NS). Single longitudinal mode operation due to excessive gain suppression? A comparative study of laser structures with and without optical confinement. PSS, v. A66, no. 1, K31-K35. (RZhF, 1/82, 1D1413)

- 22. Snopin, M.A. (1). Analysis of nonlinear losses in the active region of an injection heterolaser using bands of self-modulation fluctuations of radiation intensity. Fizicheskiy institut AN SSSR.

  Preprint, no. 191, 18 p. (RZhF, 1/82, 1D1426)
- d. Theory
- 23. Akul'shin, A.M., V.L. Velichanskiy, A.S. Zibrov, V.I. Molochev, V.V. Nikitin, V.A. Sautenkov, D.A. Tyurikov, and Ye.K. Yurkin (0).
  Line broadening and frequency stabilization in injection lasers.
  Sb 4, 44-45. (RZhRadiot, 2/82, 2Ye219)
- 24. Bass, F.G., and I.N. Oleynik (15). Feasibility of making optical magneton masers using a p-n junction in magnetic semiconductors.

  ZhTF, no. 1, 1982, 124-126.
- 25. Bayborodin, Yu.V., and A.V. Chernov (106). <u>Distributed feedback</u>
  film laser. Tr 2, 133-137. (RZhRadiot, 2/82, 2Ye205)
- 26. Darznek, S.A. (445). <u>Problems in the theory of e-beam-pumped</u>

  <u>semiconductor lasers</u>. VNII metrologicheskoy sluzhby. Dissertation,

  1980, 20 p. (KLDVAD, 1/82, 454)
- 27. Lubashevskiy, I.A., V.I. Ryzhiy, and R.A. Suris (0). Effect of

  Auger recombination on the threshold characteristics of injection

  semiconductor lasers. ZhTF P, no. 1, 1982, 36-38.
- 28. Manak, I.S. (87). Study on the dynamic characteristics of semiconductor radiation sources used in optical rangefinding.

  Belorusskiy GU. Dissertation, 1981, 18 p. (KLDVAD, 2/82, 2074)

- 29. Sychugov, V.A., A.V. Tishchenko, and A.A. Khakimov (1).

  <u>Two-dimensional periodic structures in thin-film lasers.</u>

  KE, no. 1, 1982, 44-48.
- 30. Turan, J., and J. Chmurny (NS). Physical limitations in the modulation of a semiconductor laser for high transmission speeds.

  Elektrotechnicky casopis, no. 8, 1981, 618-621. (RZhF, 1/82, 1D1485)
- 31. Zargar'yants, M.N., P.V. Dernovskiy, and A.I. Ignatov (0).

  Semiconductor solid-state laser simulator with pulse train emission.

  PTE, no. 1, 1982, 185-187.
- 32. Zibrov, A.S., V.M. Zubkov, V.V. Nikitin, and M.G. Perevalov (0).

  Semiconductor injection laser with a highly stabilized frequency.

  Sh 4, 45-46. (RZhRadiot, 2/82, 2Ye159)

### 5. Glass: Nd

- 33. Batanov, V.A., and V.P. Gorzhovskiy (1). Study on the lasing parameters of a neodymium laser with a plasma optic switch.

  Fizicheskiy institut AN SSSR. Preprint, no. 124, 1981, 12 p. (RZhRadiot, 2/81, 2Ye126)
- 34. Brachkovskaya, N.B., and A.K. Przhevuskiy (0). Effect of temperature on the spectral luminescence characteristics of neodymium laser glasses. ZhPS, v. 36, no. 1, 1982, 126-133.

- 35. Brodov, M.Ye., V.P. Degtyareva, A.V. Ivanov, P.I. Ivashkin, V.V. Korobkin, P.P. Pashinin, A.M. Prokhorov, and R.V. Serov (1).
  Study on the characteristics of a triple-pass neodymium glass slab amplifier. KE, no. 1, 1982, 121-125.
- 36. Burakov, V.S., V.A. Kononov, L.S. Korochkin, S.A. Mikhnov, V.P. Khyuppenen, and A.P. Shkadarevich (3). Lasing from a neodymium glass laser with a lithium fluoride color center Q-switch.

  DAN B, no. 1, 1982, 29-30.
- 37. Lyubimov, V.V. (0). Accuracy of evaluating laser amplifiers by a gain diagram. KE, no. 1, 1982, 179.

#### 6. Glass: Miscellaneous

- 38. Alekseyev, N.Ye., T.I. Volkonskaya, A.A. Izyneyev, V.B. Kravchenko,
  I.N. Kulikova, L.S. Parfenova, and I.A. Smirnov (15). Thermophysical
  properties of phosphate laser glasses. FikhS, no. 1, 1982, 101-105.
- 39. Avanesov, A.G., B.I. Denker, L.S. Korniyenko, V.V. Osiko, A.O. Rybaltovskiy, and V.A. Tikhomirov (98). Electron paramagnetic resonance of chromium ions in lithiolanthanum phosphate glasses. FiKhS, no. 1, 1982, 106-108.
- 40. Zakis, Yu.R., and I.A. Tale (585). <u>Fundamentals of a kinetic</u>

  particle method for describing transfer processes in glasses.

  FiKhS, no. 1, 1982, 3-10.

## B. LIQUID LASERS

## 1. Organic Dyes

## a. Rhodamine

41. Akimov, A.I., B.D. Ryzhikov, L.V. Levshin, B.M. Uzhinov, M.G. Reva, N.R. Senatorova, N.V. Korol'kova, and L.K. Denisov (0). Lasing efficiency in aqueous-ethanol solutions of rhodamine 6G as a function of the solvent composition. ZhPS, v. 36, no. 2, 1982, 225-230.

## b. Miscellaneous Dyes

- 42. Cherkasov, A.S., T.V. Veselova, Ye.N. Viktorova, I.Ye. Obyknovennaya, and M.I. Snegov (0). Luminescent characteristics of organolumino-phores in aqueous-micellar solutions. IAN Fiz, no. 2, 1982, 311-317.
- 43. Gevorkyan, L.P., G.A. Lyakhov, V.A. Makarov (2). Conditions for pumping a laser with distributed feedback in a smectic matrix.

  KE, no. 2, 1982, 374-376.
- 44. Hebling, J., Zs. Bor, B. Racz, B. Nemet, and I. Santa (NS).

  Generation of nearly transform-limited subnanosecond light pulses

  by a long cavity dye laser. APC, no. 3-4, 1980, 137-140.

  (RZhF, 1/82, 1D1386)
- 45. Horvath, Z.Gy., and S. Varro (NS). <u>Fresnel reflection halo lasers</u>.

  Kozponti fizikai kutato intezet, no. 62, 1981, 22 p. (RZhF, 1/82, 1D1472)

- 46. Horvath, Z.Gy. (NS). Nitrogen-laser-excited two-dimensional "Halo"

  dye laser. FM, no. 9, 1981, 257-259,284,288,3. (RZhF, 2/82, 2D1476)
- 47. Mirza, S.Yu., A.N. Soldatov, and V.B. Sukhanov (78,396). The LZhK-10 tunable dye laser. Sb 1, 88-90. (RZhRadiot, 1/82, 1Ye63)
- 48. Narovlyanskaya, N.M., and Ye.A. Tikhonov (5). Fast mode-locking in dye lasers. Institut fiziki AN UkrSSR. Preprint, no. 1, 1982, 68 p.
- 49. Viktorova, A.A., A.P. Savikin, and V.B. Tsaregradskiy (94).

  Two-frequency lasing from a laser using a binary dye mixture.

  IVUZ Radiofiz, no. 1, 1982, 22-27.
- 50. Vinogradova, A.A. (2). Study on forced mode-locking in a c-w dye laser. Moskovskiy GU. Dissertation, 1981, 15 p. (KLDVAD, 1/82, 442)
- 51. Zietek, B., and Cz. Koepke (NS). Temporal and spatial evolution of the gain in a dye laser amplifier. APP, v. A59, no. 6, 1981, 821-830. (RZhF, 1/82, 1D1316)

### 2. Inorganic Liquids

52. Anan'yev, Yu.A., N.I. Grishmanova, N.A. Sventsitskaya, and V.D. Solov'yev (0). Study on a liquid neodymium amplifier operating with wavefront reversal. ZhTF P, no. 1, 1982, 19-22.

## C. GAS LASERS

### 1. Simple Mixtures

- a. He-Ne
- 53. Arsen'yev, A.A., V.F. Derevyanko, G.A. Kurshev, and V.Z. Shapoval (0).

  Experimental study on dynamic drag in a glow discharge. RiE, no. 1,

  1982, 133-136.
- 54. Baran, V.M., and G.L. Kononchuk (51). <u>Transitions between excited</u>
  states in mean during atomic collisions. UFZh, no. 2, 1982, 283-285.
- 55. Golikova, Ye.V., A.P. Golovitskiy, V.A. Kruzhalov, and T.M. Perchanok
  (0). Effect of a microwave field on the operation of an He-Ne laser.
  KE, no. 2, 1982, 432-434.
- 56. Gonchukov, S.A., S.V. Kireyev, and Ye.D. Protsenko (16). Contrasting resonances in the power of a linear two-mode He-Ne/I<sub>2</sub> laser.

  KE, no. 2, 1982, 372-374.
- 57. Gonchukov, S.A., S.V. Kireyev, and Ye.D. Protsenko (0). Study on a two-mode He-Ne/I<sub>2</sub> laser at 0.63 μm. Sb 4, 42-43. (RZhRadiot, 2/82, 2Ye61)
- 58. Gubin, M.A., G.I. Kozin, I.P. Konovalov, V.V. Nikitin, V.N.

  Petrovskiy, Ye.D. Protsenko, and A.N. Rurukin (1). Two-mode He-Ne/CH<sub>4</sub>

  lasers with controlled coupling between modes. Fizicheskiy institut

  AN SSSR. Preprint, no. 148, 1981, 59 p. (RZhF, 2/82, 2D1419)

- 59. Gubin, M.A., V.V. Nikitin, A.V. Nikul'chin, V.N. Petrovskiy, Ye.D.

  Protsenko, and D.A. Tyurikov (0). Improving short-term stability and reducing frequency shifts in a two-mode He-Ne/CH, laser. Sb 4, 43-44. (RZhRadiot, 2/82, 2Ye218)
- 60. Mel'nikov, L.A., and V.V. Tuchin (0). <u>Two-mode gas laser with</u> modulated parameters. OiS, v. 52, no. 1, 1982, 137-141.
- 61. Popescu, Gh. (NS). Analyzing single frequency operation of a highpower He-Ne laser. RRP, no. 4, 1981, 345-356. (RZhF, 2/82, 2D1417)
- 62. Tuchin, V.V. (45). Intensity modulation in gas lasers operating in coupled oscillation modes. IVUZ Radiofiz, no. 1, 1982, 15-21.
  - b. He-Xe
- 63. Danilychev, V.A., V.D. Zvorykin, I.V. Kholin, and A.Yu. Chugunov (1).

  Study on an He-Xe recombination plasma laser pumped by 10.6 μm laser pulses. KE, no. 1, 1982, 92-98.
- 64. Velikotskiy, V.L. (16). Dynamic properties of a two-mode He-Xe laser.

  Deposit at VINITI, no. 4629-81, 28 Sep 1981, 12 p. (RZhF, 1/82, 1D1326)

## 2. Molecular Beam and Ion

- a. <u>CO</u><sub>2</sub>
- 65. Albrecht, H., K.P. Francke, and H. Guendel (NS). Study on small signal gain in a CO<sub>2</sub> TEA laser with photopreionization. ETP, no. 4, 1981, 393-403. (RZhRadiot, 2/82, 2Ye36)

- 66. Asinovskiy, E.I., S.Ya. Bronin, V.L. Nizovskiy, V.N. Sushkin, V.I. Shabashov, and Yu.V. Yartsev (0). Electroionization laser with an axial e-beam controlled discharge. Deposit at VINITI, no. 4828-81, 19 Oct 1981, 9 p. (RZhF, 1/82, 1D1335)
- 67. Asinovskiy, E.I., S.Ya. Bronin, V.L. Nizovskiy, V.N. Sushkin, V.I. Shabashov, and Yu.V. Yartsev (0). Electroionization laser with an axial e-beam controlled discharge. TVT, no. 1, 1982, 204-205.
- 68. Basmanov, V.F., V.S. Bosamykin, V.V. Gorokhov, V.I. Karelin, A.I. Pavlovskiy, P.B. Repin, and A.Ya. Kharchenko (0). <u>High-efficiency electric discharge CO</u> laser with an output energy of 500 joules. ZhTF, no. 1, 1982, 128-130.
- 69. Beregulin, Ye.V., P.M. Valov, S.D. Ganichev, Z.N. Kabakova, and I.D. Yaroshetskiy (4). Low threshold device for passive mode locking of pulsed IR lasers. KE, no. 2, 1982, 323-327.
- 70. Bertel', I.M., V.O. Petukhov, S.A. Trushin, and V.V. Churakov (0).

  C-w sealed-off CO<sub>2</sub> laser tunable over hot band lines in the

  10.9 11.3 µm spectral region. ZhPS, v. 36, no. 2, 1982, 320-323.
- 71. Chis, I., A. Ciura, Gh. Dragulescu, M.V. Udrea, and V.G. Velculescu (NS). Small gain measurements on an electron beam-controlled discharge CO<sub>2</sub> TEA laser. RRP, no. 6, 1981, 561-564. (RZhF, 2/82, 2D1425)
- 72. Churakov, V.V., and S.A. Trushin (3). Method for obtaining a high-power radiation pulse. Otkr izobr, no. 4, 1982, 748603.

- 73. Cosma, B.T. (NS). Experimental and theoretical study on the amplification of laser radiation in a high-pressure CO<sub>2</sub>-N<sub>2</sub>-He gas mixture excited by transverse electric discharge. RRP, no. 5, 1981, 513-524. (RZhF, 2/82, 2D1424)
- 74. Draganescu, V., and M.V. Udrea (NS). <u>Pulsed e-beam-controlled</u>
  <u>electric discharge lasers</u>. SCF, no. 7, 1981, 673-702. (RZhF,
  2/82, 2D1432)
- 75. Dumitras, D.C., D.C. Dutu, N. Comaniciu, V. Draganescu,

  R. Alexandrescu, and I. Morjan (NS). Frequency stabilized CO<sub>2</sub> laser

  design. RRP, no. 5, 1981, 485-498. (R2hF, 2/82, 2D1537)
- 76. Firsov, K.N. (1). Study on the effect of lightly ionized matter on the characteristics of a CO<sub>2</sub> amplifier pumped by a pulsed self-sustained discharge. Fizicheskiy institut AN SSSR. Dissertation, 1981, 20 p. (KLDVAD, 2/82, 2109)
- Grigoriu, C., D. Dragulinescu, I. Morjan, R. Alexandrescu,
   N. Comaniciu, D. Dumitras, R. Medianu, and D. Dutu (NS).
   Tunable CO, laser. RRP, no. 6, 1981, 569-571. (RZhF, 2/82, 2D1430)
- 78. Novgorodov, M.Z., N.N. Sobolev, and E.S. Chokoyev (1). Mode selection
  in TEA CO lasers. Fizicheskiy institut AN SSSR. Preprint, no. 87,
  1981, 58 p. (RZhF, 1/82, 1D1336)
- 79. Orlovskiy, V.M., V.V. Osipov, and V.S. Solov'yev (0). Amplification of continuously tunable signals in CO<sub>2</sub> media at high pressure.

  Sb 1, 94-96. (RZhRadiot, 1/82, 1Ye115)

- 80. Strzelec, M. (NS). Gas temperature in a conventional molecular CO<sub>2</sub>

  laser. BWAT, no. 5, 1981, 93-102. (RZhF, 2/82, 2D1426)
- 81. Vostrikov, V.G., V.G. Naumov, and L.V. Shachkin (0). Effect of specific pump power on the operational efficiency of an atmospheric pressure electroionization CO<sub>2</sub> laser. KE, no. 2, 1982, 413-415.
- 82. Vuong Nguyen Tho, and Z. Puzewicz (Russ transliteration Vyong Nguyen Tkho, and Z. Puzevich). Pulsed TEA CO<sub>2</sub> laser with an energy yield of 1.1 kJ/liter and double preliminary discharge stabilization.

  KE, no. 1, 1982, 145-147.
- 83. Vuong Nguyen Tho, and Z. Puzewicz (NS). Stabilized TEA CO<sub>2</sub> laser with double photopreionization and additives with low ionization potential. KE, no. 1, 1982, 147-149.
- 84. Yefimovskiy, S.V., and A.K. Zhigalkin (1). <u>High-pressure electric</u>

  <u>discharge CO</u> laser with continuous frequency tuning and a sharp

  <u>lasing line</u>. KE, no. 1, 1982, 158-161.
- ь. <u>со</u>
- 85. Basiyev, A.G., V.Ye. Gal'tsev, V.A. Gurashvili, S.V. Izyumov, I.V. Kochetov, A.K. Kurnosov, and V.G. Pevgov (23). Spectral formation of a Q-switched CO laser. Institut atomnoy energii. Preprint, no. 3448/12, 1981, 32 p. (RZhF, 2/82, 2D1433)

- c. Noble Gas
- 86. Berndt, K. (NS). Method for obtaining sinusoidally modulated argon

  laser radiation. Patent GDR, no. 147982, 29 Apr 1981. (RZhRadiot,
  1/82, 1Ye133)
- 87. Ebert, W., and H. Noennig (NS). Method for changing the output

  power of noble gas ion lasers. Patent GDR, no. 146371, 4 Feb 1981.

  (RZhRadiot, 1/82, 1Ye44)
- d.  $\underline{N}_2$
- 88. Baranov, S.V., V.M. Bystritskiy, A.V. Kozhevnikov, and S.S. Sulakshin (336). Study on an Ar-N<sub>2</sub> laser with high-power proton beam pumping.

  KE, no. 2, 1982, 420-422.
- 89. Barkalov, A.D., and G.G. Gladush (23). <u>Domain instability of a self-terminating discharge in electronegative gases. Part 1.</u>

  Numerical evaluation. TVT, no. 1, 1982, 19-24.
- 90. Isaykina, L.V., B.V. Kiselev, V.F. Moskalenko, and V.S. Skoz (0).

  The LCI-502 pulsed UV radiation source. PSU, no. 2, 1982, 30.
- e.  $\underline{I}_2$
- 91. Gavrilina, L.K., V.S. Zuyev, V.A. Katulin, N.N. Korzhavina, Yu.S. Leonov, Yu.I. Morozov, and A.L. Petrov (1). Recovery of the active mixture in an iodine laser pumped by an open discharge. KE, no. 2, 1982, 368-370.

92. Kamrukhov, A.S., G.N. Kashnikov, N.P. Kozlov, S.G. Kuznetsov, V.K.

Orlov, and Yu.S. Protasov (24). <u>Iodine molecular laser with broad-band optical pumping by multichannel cumulative discharge of a magnetic plasma compressor.</u> ZhTF P, no. 4, 1982, 220-224.

## f. Hydrogen

- 93. Belyayev, A.A., N.A. Demidov, and A.A. Ul'yanov (0). Study on the effect of an inhomogeneous magnetic field on the frequency and reproducibility of an unpolarized hydrogen atom beam oscillator.

  Sb 4, 54-55. (RZhRadiot, 2/82, 2Ye67)
- 94. Belyayev, A.A., N.A. Demidov, Ye.M. Yezhov, and A.A. Ul'yanov (0).

  Thermostatic control system for a hydrogen oscillator resonator.

  Sb 4, 56-57. (RZhRadiot, 2/82, 2Ye65)
- 95. Demidov, N.A., A.A. Ul'yanov, and V.A. Fedorov (0). Metrological hydrogen oscillator with a variable-volume accumulator flask.

  Sb 4, 57-58. (RZhRadiot, 2/82, 2Ye66)
- 96. Demidov, N.A., Ye.M. Yezhov, S.L. Gordeyev, Yu.K. Pavlenko, and A.A.

  Ul'yanov (0). Experimental study on frequency stabilization in a
  hydrogen quantum oscillator. Sb 4, 71-72. (RZhRadiot, 2/82, 2Ye217)

## g. HC1

97. Dem'yanov, A.V., I.V. Kochetov, S.M. Kurkin, V.G. Pevgov, and V.M. Shashkov (23). Determining the rate constant for dissociative electron capture by HCl molecules in a self-terminating discharge. TVT, no. 1, 1982, 6-10.

- h.  $\underline{D}_2\underline{O}$
- 98. Domnin, Yu.S., A.N. Malimon, V.M. Tatarenkov, and P.S. Shumyatskiy

  (0). Characteristics of a highly stable D<sub>2</sub>O laser. Sb 4, 51-52.

  (RZhRadiot, 2/82, 2Ye43)
- i. Submillimeter
- 99. Bugayev, V.A., and E.P. Shliteris (15). <u>Multifrequency submillimeter</u>
  laser. PTE, no. 1, 1982, 256.
- j. Metal Vapor
- 100. Batenin, V.M., P.A. Vokhmin, I.I. Klimovskiy, and L.A. Selezneva

  (74). Efficiency of copper vapor lasers. TVT, no. 1, 1982, 177-179.
- 101. Kaslin, V.M., and O.F. Yakushev (1). Pulsed Li<sub>2</sub> laser with optical pumping. KE, no. 2, 1982, 365-367.
- 102. Kirillov, A.Ye., Yu.P. Polunin, A.N. Soldatov, and V.F. Fedorov (0).

  The "Milan-1S" three-color pulsed copper and gold vapor laser.

  Sb 1, 91-93. (RZhRadiot, 2/82, 2Ye71)
- 103. Mis'kevich, A.I., V.S. Il'yashenko, B.S. Salamakha, A.A. Sipaylov, V.A. Stepanov, and Ye.M. Gorodkov (16). Lasing at 441.6 nm in a high-pressure mixture of <sup>3</sup>He-<sup>116</sup>Cd. ZhTF, no. 2, 1982, 402-404.
- 104. Sem, M.F. (1). Ion gas-discharge lasers using chemical element vapors. Fizicheskiy institut AN SSSR. Dissertation, 1981, 37 p. (KLDVAD, 1/82, 422)

- 105. Smirnov, Ye.A., and V.A. Budayev (110). Study on the radiation characteristics of an He-Cd laser. Tr 3, 11-15. (RZhRadiot, 2/82, 2Ye82)
- 106. Vas'kov, V.A., S.A. Gonchukov, Ye.V. Kurbatov, and Ye.D. Protsenko

  (16). Study on striation in an He-Cd laser discharge and its effect
  on radiation characteristics. ZhTF, no. 1, 1982, 29-34.

## k. Gasdynamic

- 107. Bakanov, D.G., A.A. Vedeneyev, A.Yu. Volkov, A.I. Demin, Ye.M. Kudryavtsev, A.I. Odintsov, V.A. Spazhakin, and A.I. Fedoseyev (1).

  Thermally pumped gasdynamic laser at transitions between levels of 

  v<sub>1</sub> and v<sub>2</sub> modes of the CO<sub>2</sub> molecule in the 16.4-17.2 µm range.

  Fizicheskiy institut AN SSSR. Preprint, no. 128, 1981, 8 p.

  (RZhF, 1/82, 1D1356)
- 108. Belokrinitskiy, N.S., V.A. Kochelap, L.A. Kernazhitskiy, and M.T.

  Shpak (5,6). Preliminary laser studies on recombination of chlorine
  atoms. KE, no. 2, 1982, 298-308.
- energy transfer in systems with optical feedback. KE, no. 1, 1982, 36-43.
- 110. Doroshenko, V.M., N.N. Kudryavtsev, and S.S. Novikov (67).

  CO<sub>2</sub> gasdynamic laser with a high hydrogen concentration in the active mixture. DAN SSSR, v. 262, no. 4, 1982, 869-872.

- 111. Fomin, N.A., and S.M. Khizhnyak (0). Selection characteristics for the mixture in a CO<sub>2</sub>-N<sub>2</sub>-H<sub>2</sub>O gasdynamic laser. I-FZh, v. 42, no. 1, 1982, 42-46.
- 112. Kireyev, V.I., and S.N. Minin (23). <u>Profiling of flat and axial-symmetric supersonic nozzles for gasdynamic lasers</u>. Institut atomnoy energii. Preprint, no. 3453/16, 1981, 30 p. (RZhF, 2/82, 2D1447)
- 113. Rodionov, N.B. (23). Homogeneous low-temperature CO<sub>2</sub>-D<sub>2</sub>-T gasdynamic

  laser. Institut atomnoy energii. Preprint, no. 3485/16, 1981, 8 p.

  (KL, 7/82, 5843)
- 114. Syczewski, M., and Cz. Bartoszek (Russ transliteration of Polish:

  Sychevski, M., and Ch. Bartoshek). <u>Using a solid fuel in a</u>

  gasdynamic laser. KE, no. 1, 1982, 125-129.
- 115. Vasilik, N.Ya., A.D. Margolin, and V.M. Shmelev (0). Effect of the shape of the supersonic part of a nozzle on the redistribution rate for molecular vibrational levels in the active medium of a CO gasdynamic laser. ZhPMTF, no. 1, 1982, 69-75.
- 116. Vedeneyev, A.A., A.Yu. Volkov, A.I. Demin, and Ye.M. Kudryavtsev (0).

  Study on an 18.4 µm CO<sub>2</sub>-Ne gasdynamic laser. ZhTF P, no. 4, 1982,
  250-255.
- 117. Volkov, A.Yu. (1). Study of thermal gasdynamic lasers using low vibrational levels of triatomic molecules. Fizicheskiy institut AN SSSR. Dissertation, 1981, 22 p. (KLDVAD, 1/82, 444)

#### 3. Excimer

- 118. Baranov, S.V., V.M. Bystritskiy, A.N. Didenko, A.V. Kozhevnikov,
  A.M. Prokhorov, S.S. Sulakshin, and Yu.P. Usov (336,1). XeCl laser
  pumped by a high-current proton beam. KE, no. 1, 1982, 110-114.
- 119. Basov, N.G., M.B. Vakhanev, V.A. Danilychev, A.G. Degtyarev, V.G.

  Zarudin, V.A. Kazakovtsev, and O.M. Kerimov (0). <u>High-power electro-ionization XeCl\* excimer laser in the UV spectral region</u>. ZhTF P, no. 4, 1982, 245-250.
- 120. Karapuzikov, A.I., V.K. Makukha, and A.M. Razhev (159). Active mode-lock in an XeCl laser. KE, no. 1, 1982, 150-152.

#### 4. Theory

- 121. Arutyunyan, G.G. (264). Effect of electronegative gases on the parameters of a positive discharge column and gas lasers. Institut radiofiziki i elektroniki AN SSSR. Dissertation, 1981, 16 p. (KLDVAD, 2/82, 2017)
- 122. Balakin, V.A., S.B. Kotel'nikov, and A.I. Popov (0). Mode competition at various Q's in a gas laser with homogeneous line broadening. ZhPS, v. 36, no. 2, 1982, 207-212.
- 123. Bondar', Yu.F., S.I. Zavorotnyy, A.L. Ipatov, G.P. Mkheidze, A.A.

  Ovchinnikov, and A.A. Savin (1). Relativistic e-beam transport in

  a dense neutral gas under magnetic confinement. KSpF, no. 1, 1982,

  3-7.

- 124. Bugayev, V.A., L.I. Pangonis, and E.P. Shliteris (15). Waveguide gas laser. Otkr izobr, no. 1, 1982, 757087.
- 125. Daume, E.Ya. (426). Stability of pulsed lasing in a laser with periodic loss modulation. IVUZ Radiofiz, no. 2, 1982, 157-168.
- 126. Fedorchenko, A.T. (0). Problems in numerical modeling of transient spatial flows of a viscous gas in nozzles. ZhVMMF, no. 1, 1982, 178-196.
- 127. Gontar', V.G., S.V. Fashkin, and S.A. Surguchenko (202). Feasibility of reconstructing the mechanism and rate constant of elementary processes in a fast-flow laser gas discharge plasma. ZhTF, no. 1, 1982, 22-28.
- 128. Ionikh, Yu.Z., and S.P. Yakovitskiy (12). <u>Device for studying</u>

  processes in a decaying plasma by means of optical pumping. Deposit

  at VINITI, no. 4889-81, 26 Oct 1981, 14 p. (RZhF, 2/82, 2G369)
- 129. Kravchenko, V.F., E.K. Karabut, A.A. Gudkov, and V.Ye. Bogoslavskiy (325). Effect of acoustic waves on the output power of pulsed gas-discharge lasers. KE, no. 2, 1982, 270-274.
- 130. Leonov, A.G. (118). Experimental study on gas-discharge high-pressure pulsed lasers in the visible and ultraviolet. Moskovskiy fizikotekhnicheskiy institut. Dissertation, 1981, 15 p. (KLDVAD, 2/82, 2068)
- 131. Levin, V.A., and A.M. Starik (248). Analysis of hydrogen halide lasers. KE, no. 2, 1982, 315-322.

- 132. Lunev, Ye.I., V.M. Nestenko, N.P. Kosyreva, and F.K. Kosyrev (0).

  Electrode plate in a fast-flow electric discharge laser with

  transverse gas injection. Othr izobr, no. 7, 1982, 814218.
- 133. Samusenko, A.M. (3). Effect of electron-excited degrees of freedom on the thermal dissociation of diatomic molecules. Sb 2, 101-105.
- 134. Snegurskiy, A.V., and I.V. Chernyshova (136). Study on the formation of metastable states of atoms and molecules by electron impact above the threshold of ionization. Sb 2, 106-111.
- 135. Vas'kov, V.A., S.A. Gonchukov, Ye.V. Kurbatov, and Ye.D. Protsenko

  (16). Effect of the Penning process on noise in gas-discharge

  lasers. KE, no. 2, 1982, 390-392.
- D. CHEMICAL LASERS

1. 
$$F_2 + H_2(D_2)$$

136. Borisov, V.M., Ye.B. Gordon, V.I. Matyushenko, V.D. Sizov, and O.B. Khristoforov (67). HF chemical laser initiated by an XeCl excimer laser. KE, no. 2, 1982, 434-436.

### 2. Photodissociative

137. Grenishin, A.S., V.M. Kiselev, and T.N. Kotlikova (0). <u>Two-frequency</u>
<u>lasing in a single-pulsed photodissociation iodine laser</u>. OiS,
v. 52, no. 2, 1982, 345-352.

- 138. Skorobogatov, G.A., B.N. Maksimov, V.G. Seleznev, O.N. Slesar', N.D. Torbin, and L.N. Kostyreva (12). New active media for a photo-dissociation iodide laser. KE, no. 2, 1982, 253-259.
- 139. Zalesskiy, V.Yu., A.M. Kokushkin, and S.S. Polikarpov (0).

  C-w lasing from a photodissociation laser with recycled gaseous trifluormethyl iodide. KE, no. 1, 1982, 20-25.
  - 3. Transfer
  - 4. CS<sub>2</sub>+0<sub>2</sub>
- 140. Gordon, Ye.B., S.Ye. Nalivayko, and V.S. Pavlenko (67). Chemical

  laser based on the branching chain-reaction of carbon disulfide

  oxidation. KE, no. 1, 1982, 171-174.
- 141. Rukhin, V.B. (17). <u>Development of a c-w chemical CO laser using</u>

  combustion of CS<sub>2</sub> in a subsonic flow and study of its energy

  characteristics. Institut problemy mekhaniki AN SSSR. Dissertation,

  1981, 24 p. (KLDVAD, 1/82, 391)
- E. COMPONENTS
- 1. Resonators
- a. Design and Performance
- 142. Baukov, V.A., and A.V. Ponomarev (23). Establishment of unidirectional lasing in a solid-state ring laser. Sb 2, 119-124.

- 143. Boytsov, V.F., and A.G. Vladimirov (12). Optical ring resonator with an offset medium. Deposit at VINITI, no. 4013-81, 12 Aug 1981, 14 p. (RZhF, 1/82, 1D1471)
- 144. Kukhtarev, N.V. (5). Optical bistability with distributed feedback in cholesteric liquid crystals. UFZh, no. 2, 1982, 291-293.
- 145. Vashkevich, I.M., and N.N. Uvarova (0). Waveguide laser resonators.

  ZhPS, v. 36, no. 2, 1982, 205-207.
  - b. Mode Kinetics
- 146. Annenkov, V.I., Yu.D. Bogunenko, N.A. Pershin, and Yu.P. Shcherbak
   (16). E-O mode-lock generator for lasers. PTE, no. 1, 1982, 184-185.
- 147. Koenig, R., and S. Mory (NS). <u>Transient oscillations in nanosecond</u>

  dye lasers. ETP, no. 3, 1981, 203-212. (RZhRadiot, 2/82, 2Yel5)

#### 2. Pump Sources

- 148. Arutyunyan, S.G., O.V. Bogdankevich, Yu.F. Bondar', S.I. Zavorotnyy,
  A.L. Ipatov, G.P. Mkheidze, A.A. Ovchinnikov, and A.A. Rukhadze (1).

  Propagation of an intense e-beam in neutral gases. KE, no. 2,
  1982, 234-247.
- 149. Basov, Yu.G., S.A. Boldyrev, S.F. Dzyubanov, and V.V. Sysun (0).

  Principles of flashlamp failure. Deposit at VINITI, no. 4835-81,

  19 Oct 1981, 22 p. (RZhF, 1/82, 1D1067)

- 150. Basov, Yu.G., L.I. Gavrilova, V.A. Kapustin, and V.V. Poduval'tsev

  (0). Radiation from pulsed mercury xenon lamps with short discharge durations. ZhPS, v. 36, no. 1, 1982, 19-22.
- 151. Bozhokin, S.V., and B.G. Matisov (0). Solution for an optical pumping equation. Ois, V. 52, no. 1, 1982, 131-136.
- 152. Budkin, L.A., A.I. Pikhtelev, S.L. Puzanov, and B.P. Fateyev (0).

  Study on methods for laser pumping in quantum frequency standards.

  Sb 4, 66-67. (RZhRadiot, 2/82, 2Ye422)
- 153. Chitakyan, O.K., and M.G. Shterev (Bulgarians). Solar-pumped laser.

  Otkr izobr, no. 5, 1982, 904053.
- 154. Fedorov, L.N. (0). <u>Device for producing light pulses</u>. Author's certificate USSR, no. 851801, 30 July 1981. (RZhRadiot, 2/82, 2Ye425)
- 155. Kalashnikova, A.I., and V.I. Khutorshchikov (0). <u>Designing a light</u>
  source for optical pumping. Sb 5, 164-173. (RZhF, 1/82, 1D1069)
- 156. Kovalenko, Ye.S., V.A. Laptev, G.G. Kushch, T.V. Ulyashkina, and S.G. Silukov (251). Characteristics of pulses of radiation from super-high pressure mercury capillary lamps. IVUZ Fiz, no. 2, 1982, 73-79.
- 157. Orzegowski, H., C. Peschel, and G. Thiede (NS). Method and device
  for excitation and shaping of laser pulses. Patent GDR, no. 148414,
  20 May 1981. (RZhRadiot, 1/82, 1Ye316)

- 158. Panfilov, D.I., V.N. Sirik, V.N. Krasavin, V.S. Ivanov, O.A.

  Romanenko, and A.G. Bomko (119). <u>Device for charging a capacitance</u>

  <u>energy accumulator</u>. Author's certificate USSR, no. 834843,

  6 June 1981. (RZhRadiot, 1/82, 1Ye321)
- 159. Shveygert, V.A. (193). Optimal parameters for an e-beam controlling the discharge in electroionization lasers. Sb 2, 128-133.
- 160. Sprachta, A. (NS). LED pumping of a YAG laser featuring a tight gap pumping cavity. TESLA electronics, no. 4, 1981, 116-123,98.

  (R2hRadiot, 2/82, 2Yell8)

#### 3. Deflectors

- 161. Kravchenko, V.I., V.M, Moskalev, Yu.L. Oboznenko, Yu.D. Opanasyuk,
  Ye.N. Smirnov, and V.V. Taranov (0). <u>Tunable laser with an acousto-optic deflector in the resonator</u>. ZhTF P, no. 3, 1982, 174-178.
- 162. Kryzhanovskiy, V.I., V.A. Serebryakov, V.R. Startsev, and A.A.

  Chertkov (0). Fast-flow E-O deflectors and their use for controlling the time characteristics of laser pulses in the 10<sup>-11</sup> 10<sup>-8</sup> second range. KE, no. 1, 1982, 76-82.

## 4. Polarizers

163. Kiselev, V.K., and D.D. Litvinov (84). Device for rotating the plane of polarization. Sb 6, 62-63. (RZhRadiot, 2/82, 2Ye420)

## 5. Amplifiers

164. Ramazanova, G.S. (19). <u>Two-conductor amplifier containing a retro-mirror and a medium with a transverse inhomogeneity of refraction</u> and <u>amplification</u>. Tr 4, 37-41. (RZhF, 1/82, 1D1529)

### 6. Filters

- 165. Kuehmstedt, R., V. Brueckner, and B. Schroeder (NS). <u>Polarization</u>

  filter for coupling, decoupling and splitting of coherent radiation.

  Patent GDR, no. 145803, 7 Jan 1981. (RZhRadiot, 2/82, 2Ye418)
- 166. Rubinov, Yu.A., and Yu.T. Mazurenko (0). Spatial filter.

  Author's certificate USSR, no. 800941, 30 Jan 1981. (RZhRadiot, 2/82, 2Ye417)
- 167. Zuykova, N.V., and V.D. Svet (0). Possibility of developing an optical matching filter for processing acoustic signals. Sb 7, 71-72.

## 7. Mirrors

- 168. Bolla, I., I. Csanyi, and K. Ferencz (NS). Y<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> laser mirrors in the UV. FM, no. 8, 1981, 244-247,256,228. (RZhRadiot, 1/82, 1Ye300)
- 169. Mestrizhenko, Yu.A. (0). <u>Polarization prisms based on total internal</u> reflection used as end mirrors in a neodymium laser. Ois, v. 52, no. 2, 1982, 381-382.

170. Prudov, A.Ya. (118). Effect of microrelief in the surface of metal mirrors in laser resonators on their characteristics and radiation structure. Moskovskiy fiziko-tekhnicheskiy institut. Dissertation, 1980, 19 p. (KLDVAD, 1/82, 521)

### 8. Detectors

- 171. Gribnyak, L.G., E.M. Den'ga, V.N. Zvegintsev, and V.I. Korneychuk (0).

  Photodiode parametric detector of atmospherically scattered laser

  radiation. Sb 1, 237-240. (RZhRadiot, 2/82, 2Ye411)
- 172. Gulgazaryan, K.A., V.A. Dianova, Ye.R. Mustel', and Yu.D. Podoprigorov

  (0). Reception of 10 gigahertz modulated optical radiation using

  heterodyned photomultipliers. RiE, no. 1, 1982, 181-182.
- 173. Pozin, P.A. (0). Efficient detection of elliptically polarized optical signals. Sb 8, 127-134. (RZhRadiot, 2/82, 2Ye410)
- 174. Smirnov, V.S., and B.V. Yurist (0). Optical signal detector in modulated background noise. Radiotekhnika, no. 8, 1981, 77-79.

  (RZhRadiot, 1/82, 1Ye301)
- 175. Voytsekhovskiy, A.V., and Yu.V. Lidenko (0). Photodetectors in the 8-14 μm range in optical systems for studying the interaction of radiation with the atmosphere. Sb 1, 210-213. (RZhRadiot, 1/82, 1Ye305)

#### 9. Modulators

- 176. Akhmedzhanov, I.M., S.I. Bozhevol'nyy, Ye.M. Zolotov, A.M. Prokhorov, and Ye.A. Shcherbakov (1). Study on a thin-film Bragg electrooptic modulator in Linbo<sub>3</sub>. Fizicheskiy institut AN SSSR. Preprint, no. 92, 1981, 20 p. (RZhF, 1/82, 1D1125)
- 177. Akhmedzhanov, I.M., S.I. Bozhevol'nyy, Ye.M. Zolotov, A.M. Prokhorov, and Ye.A. Shcherbakov (1). Study on a variable-period thin film Bragg modulator. KE, no. 1, 1982, 48-56.
- 178. Bakos, J.S., Zs. Sorlei, Cs. Kuti, and S. Szikora (NS). Subharmonic resonances in KDP electrooptic light shutters. APH, no. 4, 1980 (1981), 423-428. (RZhF, 2/82, 2D1549)
- 179. Bannov, V.Ya., V.A. Gusev, and R.I. Kipper (0). <u>Information</u>

  capacity of multichannel acoustooptic modulators. IVUZ Radioelektr,
  no. 2, 1982, 94-97.
- 180. Barzhin, V.Ya., N.D. Volkova, V.I. Zvorskiy, and V.F. Proskurin
  (200). Optical modulator. Author's certificate USSR, no. 807195,
  7 March 1981. (RZhRadiot, 2/82, 2Ye224)
- 181. Belova, G.N. (0). Acoustic modulation of Nd-glass and YAG laser radiation intensity. Sb 7, 33-36.
- 182. Belova, G.N., and Ye.I. Remizova (0). <u>Light-beam scanning due to</u> acoustooptic interaction in a laser resonator. Sb 7, 37-39.

- 183. Belova, G.N., and Ye.I. Remizova (21). <u>Two-frequency acoustic</u>

  modulation of the intensity of solid state laser radiation.

  KE, no. 1, 1982, 115-120.
- 184. Bessonov, A.F., V.A. Volkov, L.N. Deryugin, Yu.V. Zaumyslov, S.A. Kalekin, V.A. Komotskiy, A.N. Marchuk, and V.Ye. Sotin (14).

  Optical waveguide modulator. Author's certificate USSR, no. 811194,

  7 March 1981. (RZhRadiot, 1/82, 1Ye126)
- 185. Bozhevol'nyy, S.I., Ye.M. Zolotov, A.M. Prokhorov, and Ye.A.

  Shcherbakov (1). Study on an interferometric modulator based on channeled waveguides in Linbo<sub>3</sub>. Fizicheskiy institut AN SSSR.

  Preprint, no. 94, 1981, 20 p. (RZhF, 1/82, 1D1129)
- 186. Czitrovszky, A., and P. Jani (NS). Photoelastic optical polarization modulators. FM, no. 9, 1981, 269-273, 288, 3. (RZhF, 2/82, 2D1197)
- 187. Karizhenskiy, Ye.Ya., and V.P. Mitin (0). Optical device for modulating radiation. Author's certificate USSR, no. 842688, 30 June 1981. (RZhRadiot, 2/82, 2Ye226)
- 188. Kopylov, Yu.L., V.B. Kravchenko, and V.V. Kucha (15). Effect of

  doping on the electrooptic properties of Bi<sub>12</sub>SiO<sub>20</sub> single crystals.

  ZhTF P, no. 4, 1982, 205-207.
- 189. Krebs, A.R., and A.G. Kuznetsov (0). <u>Control circuit for electrooptic</u>
  light modulators. Sb 9, 156-168. (RZhF, 1/82, 1D1127)

- 190. Navratil, V., B. Pucek, and R. Gata (NS). <u>Fabrication of an iodine-filled absorption cell for a laser resonator</u>. JMO, no. 8, 1981, 205-208. (RZhF, 1/82, 1D1168)
- 191. Nikolayev, I.V., V.P. Anan'yev, A.N. Kudryavtsev, and A.D. Manuil'skiy

  (0). Study on the frequency characteristics of an accistooptic

  modulator. KE, no. 1, 1982, 32-36.
- 192. Pak, S.K., V.N. Parygin, and A.I. Portnyagin (2). <u>Polarization</u>

  <u>switching of c-w YAG:Nd<sup>3+</sup> laser radiation</u>. KE, no. 2, 1982, 398-400.
- 193. Svet, V.D., and G.N. Yakovenko (0). Acoustooptic modulation by nematic liquid crystals. Sb 7, 93-95.
- 194. Vasil'yev, M.V., A.A. Leshchev, P.M. Semenov, and V.G. Sidorovich

  (0). Characteristics of Q-switching an optical resonator by a

  stimulated Brillouin scattering mirror. ZhTF, no. 2, 1982, 318-323.
- 195. Yesipov, I.B., and V.V. Kulikov (0). Experimental study on the modulation of optical radiation by sound vibrations on a free liquid surface in the presence of a capillary wave. Sb 7, 68-71.
- 196. Yurchikov, B.M. (0). Device for controlling an electrooptic light

  polarization switch. Author's certificate USSR, no. 822362,

  15 April 1981. (RZhRadiot, 1/82, 1Ye134)
- 197. Yurchikov, B.M. (0). High voltage switching in a capacitive load by stepped recharging. Radiotekhnika, no. 8, 1981, 85-88. (RZhRadiot, 1/82, 1Ye132)

### F. NONLINEAR OPTICS

# 1. Frequency Conversion

- 198. Agranovich, V.M., and S.A. Darmanyan (72). Theory on second harmonic generation during the reflection of light from a medium with an inversion center. ZhETF P, v. 35, no. 2, 1982, 68-70.
- 199. Atabayev, Sh., Yu.N. Polivanov, and S.N. Poluektov (1). <u>Difference</u>

  frequency tunable laser over the 3.8-6.0 μm range with a high
  repetition rate. KE, no. 2, 1982, 378-380.
- 200. Davydov, B.L., and Yu.O. Yakovlev (15). Noncollinear interactions
  in urea crystals during nonlinear conversion of optical frequencies.

  KE, no. 2, 1982, 402-406.
- 201. Liberts, G.V., and V.Ya. Fritsberg (0). Second harmonic generation investigations in the paraelectric phase of perovskite type ferro-electrics. PSS, v. A67, no. 1, 1981, K81-K84. (RZhF, 2/82, 2Ye2020)
- 202. Oseledchik, Yu.S. (581). Efficiency of parametric multiphoton frequency conversion in a stochastic pump field. UFZh, no. 1, 1982, 22-27.
- 203. Ovechko, V.S., and V.L. Strizhevskiy (51). <u>High-efficiency</u>

  parametric conversion of IR radiation to the UV in sodium vapor.

  ZhTF, no. 1, 1982, 144-146.
- 204. Shtykov, N.M., L.M. Blinov, A.M. Dorozhkin, and M.I. Barnik (174).

  Second harmonic generation in liquid crystals. ZhETF P, v. 35, no. 4,

  1982, 142-144.

- 205. Vinogradov, Ye.A., A.N. Vtyurin, A.F. Goncharov, G.N. Zhizhin, I.S. Kabanov, and V.F. Shabanov (0). Second optical harmonic generation in a crystal with macroscopic inhomogeneities. Ois, v. 52, no. 1, 1982, 159-160.
- 206. Vizgert, R.V., B.L. Davydov, S.G. Kotovshchikov, and M.P.

  Starodubtseva (15). Generating second harmonics of a neodymium laser

  in non-center symmetric organic compound powders. KE, no. 2, 1982,

  380-363.
- 207. Volosov, V.D., B.G. Malinin, and V.G. Pankov (0). Study on the efficiency of second harmonic generation during two types of interactions, and optimization of laser parameters. KE, no. 1, 1982, 5-8.

#### 2. Parametric Processes

- 208. Ivakhnik, V.V. (2). Study on the reconstructed field in parametric wavefront reversal. Moskovskiy GU. Dissertation, 1981, 15 p.

  (KLDVAD, 1/82, 467)
- 209. Lapin, V.G., and V.V. Tamoykin (0). <u>Parametric conversion of wave beams in a fluctuating medium at a mirror</u>. Sb 10, 154-157.

  (RZhF, 1/82, 1Zh29)
- 210. Paul, B.H., and W. Brunner (NS). Anticorrelations in nondegenerate

  parametric three-wave interaction. Annalen der Physik, no. 2, 1981,
  89-96. (RZhF, 2/82, 2Zh19)

# 3. Stimulated Scattering

### a. Raman

- 211. Andreyev, R.B., V.A. Gorbunov, S.S. Gulidov, S.B. Papernyy, and V.A. Serebryakov (0). Role of parametric effects in generating higher stimulated Raman scattering components in gases. KE, no. 1, 1982, 56-60.
- 212. Bobrovskiy, A.N., A.V. Kozhevnikov, R.I. Kopyrina, V.A. Mishchenko, G.D. Myl'nikov, and A.F. Semerok (0). Rotational stimulated Raman scattering of CO<sub>2</sub> laser radiation in ortho-hydrogen. ZhTF P, no. 3, 1982, 186-188.
- D'yakov, Yu.Ye., and S.Yu. Nikitin (2). Theory on coherent Raman mixing in a strong pump field (six-wave model). VMU, no. 1, 1982, 54-60.
- 214. Gorbunov. V.A. (0). <u>Stimulated Raman scattering in an ultrashort</u> optical pulse field. KE, no. 1, 1982, 152-155.
- 215. Kircheva, P.P., and E.N. Keskinova (NS). Spectra of stimulated
  Raman scattering at resonance and preresonance. Bolgarskiy
  fizicheskiv zhurnal, no. 3, 1981, 257-266. (RZhF, 1/82, 1D1536)
- 216. Maksimov, A.A., and I.I. Tartakovskiy (0). Stimulated resonant
  Raman scattering of light in anthracene crystals. PSS, v. B107,
  no. 1, 1981, 55-60. (RZhF, 2/82, 2D1610)

- 217. Zenenko, A.A. (0). Stimulated Raman scattering in a pump field with Markov phase modulation. ZhPS, v. 36, no. 2, 1982, 220-225.
  - b. Brillouin
- 218. Baumgaertel, K., K. Sauer, and D. Suender (NS). Long-time stimulated

  Brillouin scattering oscillations in plasmas with supersonic flow.

  Sb 11, K14. (RZhF, 2/82, 2G58)
- 219. Korniyenko, L.S., and V.N. Serkin (2). Effect of a stimulated

  Brillouin scattering mirror on the time characteristics of solidstate laser radiation. ZhTF P, no. 1, 1982, 7-10.
- 220. Venitskiy, V.N., V.V. Yeremenko, and E.V. Matyushkin (36). Optical detection of parametric spin waves in yttrium iron garnet. ZhTF P, no. 3, 1982, 139-142.
  - c. Miscellaneous Scattering
- 221. Zaskal'ko, O.P. (1). Spectral and time characteristics of stimulated

  light scattering in an external resonator. Fizicheskiy institut

  AN SSSR. Dissertation, 1981, 14 p. (KLDVAD, 1/82, 461)
- 222. Zel'dovich, B.Ya., and V.V. Shkunov (17). <u>Characteristics of stimulated scattering in opposed pump beams</u>. KE, no. 2, 1982, 393-395.

## 4. Self-focusing

- 223. Babichenko, S.M., N.Ye. Bykovskiy, and Yu.V. Senatskiy (1).

  Feasibility of decreasing nonlinear losses during small-scale

  self-focusing in a piecewise continuous medium. KE, no. 1,

  1982, 161-164.
- 224. Vlasov, S.N., V.I. Kryzhanovskiy, and V.Ye. Yashin (0). <u>Using</u>

  <u>circularly polarized optical beams to suppress self-focusing</u>

  <u>instability in a cubic nonlinear medium with repeaters</u>.

  KE, no. 1, 1982, 14-20.

#### 5. Acoustic Interaction

- 225. Askar'yan, G.A., N.P. Datskevich, N.N. Kononov, and G.P. Kuz'min (1).

  Acoustic optical waveguide and channel along the axis of a tubular

  laser beam\_in a medium. ZhETF P, no. 3, 1982, 152-157.
- 226. Bozhkov, A.I., F.V. Bunkin, and A.A. Kolomenskiy (0). Thermooptic excitation of sound by a pulsed laser scanning beam. Sb 7, 40-43.
- 227. Bozhkov, A.I., F.V. Bunkin, and A.A. Kolomenskiy (0). <u>Transmission</u> of sound emission by a thermooptic source. Sb 7, 44-46.
- 228. Bozhkov, A.I., A.I. Malyarovskiy, and V.G. Mikhalevich (0). Sound field of a thermooptic emitter in a wave zone. Sb 7, 46-49.
- 229. Bozhkov, A.I., F.V. Bunkin, A.N. Galstyan, L.M. Dorozhkin, V.G.

  Mikhalevich, G.P. Shipulo, and Ye.I. Shklovskiy (0). Optoacoustic

  pulsed sound concentrator. Sb 7, 49-51.

- 230. Bozhkov, A.I., F.V. Bunkin, A.I. Malyarovskiy, V.G. Mikhalevich, and G.P. Shipulo (0). Experimental study on the dynamics of acoustic field formation from a moving optoacoustic source. Sb 7, 52-54.
- 231. Cherepetskaya, Ye.B. (0). Thermooptic excitation of sound in inhomogeneously absorbing media. Sb 7, 96-97.
- 232. Gulyayev, Yu.V., and G.N. Shkerdin (15). <u>Traveling-wave laser</u>
  produced by a sound pulse in an active medium. ZhTF P, no. 1,
  1982, 41-45.
- 233. Gurova, I.N., O.A. Kapustina, and V.N. Lupanov (0). <u>Kinetics of an acoustooptic effect in nematic-cholesteric mixtures</u>. Sb 7, 57-59.
- 234. Gurova, I.N., O.A. Kapustina, and V.N. Lupanov (0). Acoustooptic properties of samples of nematic crystals with variable molecular orientation. Sb 7, 60-62.
- 235. Kapustina, O.A. (0). Development of research in the field of acoustooptic liquid crystals. Sb 7, 25-30.
- 236. Karabutov, A.A., A.I. Portnyagin, O.V. Rudenko, and Ye.B.

  Cherepetskaya (0). Theoretical and experimental study on nonlinear and diffractional evolution of wideband signals during thermooptic excitation. Sb 7, 73-76.
- 237. Krasheninnikov, A.A., and A.V. Shablya (0). Determining the quantum yield of luminescence from highly excited electronic states of molecules using optoacoustic effects. OiS, v. 52, no. 2, 1982, 263-268.

- 238. Lyamshev, L.M., and L.V. Sedov (0). Sound generation in a liquid by a laser beam moving along its surface. Sb 7, 81-84.
- 239. Lyamshev, M.L., V.G. Mikhalevich, and G.P. Shipulo (0). <u>Thermooptic</u> excitation of sound waves in a liquid by a sequence of laser pulses. Sb 7, 85-88.
- 240. Petrov, D.V., A.V. Tsarev, and I.B. Yakovkin (10). Acoustooptic interaction in a diffuse waveguide with a dielectric coating.

  KE, no. 2, 1982, 247-253.
- 241. Varavin, V.Yu., I.B. Yesipov, and V.V. Zosimov (0). Acoustooptic interaction on a free liquid surface in the presence of thermal noise. Sb 7, 54-56.
- 242. Voloshinov, V.B., V.G. Zakharov, V.N. Parygin, I.Yu. Solodov, and

  N.S. Tankovski (0). Optical diffraction by an acoustic wave surface
  in lithium niobate. IVUZ Radioelektr, no. 1, 1982, 14-19.
- 243. Yegerev, S.V., L.M. Lyamshev, and K.A. Naugol'nykh (0). Optical generation of sound. Nonlinear mechanisms. Sb 7, 6-12.
- 244. Yevtikhiyev, N.N., V.V. Moshkin, V.L. Preobrazhenskiy, and N.A. Ekonomov (161). <u>Acoustooptic modulation in hematite</u>. ZhETF P, v. 35, no. 1, 1982, 31-34.

# 6. General Theory

- 245. Abramovich, B.S., and V.V. Tamoykin (0). Resonant interaction of waves in nonlinear media with random inhomogeneities. Sb 12, 261-264. (RZhF, 1/82, 1Zh27)
- 246. Akul'shina, L.G., and S.D. Pinchuk (0). <u>Thermal self-action of a vertically oriented beam of radiation</u>. Sb 12, 310-313. (RZhF, 1/82, 1Zh31)
- 247. Alimov, D.T., Yu.N. Mitir, and P.K. Khabibullayev (85). Change in the radiation polarization in cubic paramagnetic crystals. KE, no. 2, 1982, 327-332.
- 248. Azimov, B.S., and A.K. Sukhorukova (0). <u>Dispersion effects during</u>
  three-frequency interaction of wave packets. Sb 12, 285-287.

  (RZhF, 1/82, 1Zh28)
- 249. Badziak, J. (Russ transliteration of Folish: Badzyak, Ya.).

  Deformation of space-time structure of a laser pulse during two-photon
  absorption. KE, no. 2, 1982, 260-269.
- 250. Bagdasaryan, O.V., A.I. Volin, V.A. Permyakov, and V.M. Uvarov (0).

  Plane and spatially modulated electromagnetic waves in bounded
  nonlinear media. Sb 10, 324-327. (RZhF, 1/82, 1Zh33)
- 251. Balitskiy, S.D., and L.T. Bolotskikh (210). Reflection of an IR

  signal during a degenerate four-photon parametric interaction in SF<sub>6</sub>.

  ZhTF P, no. 1, 1982, 52-55.

- 252. Baryshnikov, F.F., V.S. Lisitsa, and S.A. Sukhin (23). Nonlinear effects in the absorption of high-power resonance radiation by atoms subject to acceleration and Brownian motion. Institut atomnoy energii. Preprint, no. 3437/6, 1981, 55 p. (RZhF, 2/82, 2D1378)
- 253. Baumgaertel, K., K. Sauer, and D. Suender (NS). Raman back-scattering in an inhomogeneous plasma. Sb 11, K16. (RZhF, 2/82, 2G45)
- 254. Bilenko, D.I., and V.A. Lodgauz (0). Nonlinear waves in absorbing media with a metal-semiconductor phase transition. Sb 12, 288-291. (RZhF, 1/82, 1Zh30)
- 255. Bol'shov, L.A., D.V. Vlasov, and R.A. Garayev (1). Spatial resonance during four-photon interaction of codirectional waves in a cubic medium. KE, no. 1, 1982, 83-91.
- 256. Garayev, R.A., D.V. Vlasov, and V.V. Korobkin (1). Necessity of taking slow nonlinearity into account when measuring n<sub>2</sub>. KE, no. 1, 1982, 155-157.
- 257. Izgorodin, V.M., S.B. Kormer, G.G. Kochemasov, V.D. Nikolayev, and
  A.V. Pinegin (0). Wavefront reversal during four-wave mixing in a
  medium with Raman nonlinearity. KE, no. 2, 1982, 229-234.
- 258. Kabanov, V.V., and A.S. Rubanov (3). Wavefront reversal during degenerate four-wave interaction in amplifying dye solutions.

  2hTF P, no. 2, 1982, 90-94.

- 259. Karamzin, Yu.N., and I.L. Tsvetkova (0). Convergence of a spectral method for solving a nonlinear optical problem. ZhVMMF, no. 1, 1982, 235-240.
- 260. Kempf, K., G. Schmieder, G. Kurtze, and C. Klingshirn (NS).
  Excitation induced renormalization effects of the excitonic polariton dispersion in CdS. PSS, v. Bl07, no. 1, 1981, 297-306. (RZhF, 1/82, 1Yel591)
- 261. Klyatskin, V.I., V.F. Kozlov, and Ye.V. Yaroshchuk (510). <u>Coefficient</u>
  of reflection in a one-dimensional problem on self-action in waves.

  ZhETF, v. 82, no. 2, 1982, 386-396.
- 262. Kufcakova, J., and P. Vojtek (NS). <u>Using a Gaussian beam to study</u>
  nonlinear absorption of light. Acta physica slovenia, no. 4, 1981,
  249-255. (RZhF, 1/82, 1D1494)
- 263. Kurbatov, A.A., and T.Ya. Popova (193). Resonance effects in the interaction of noncollinear polarized light waves with a gas flow. Institut teoreticheskoy i prikladnoy mekhaniki SOAN. Preprint, no. 22, 1981, 33 p. (RZhF, 2/82, 2D1640)
- 264. Lewenstein, M., and K. Rzazewski (NS). Scattering of light by a system of harmonic oscillators. APP, v. A60, no. 1, 1981, 123-128.
  (RZhF, 2/82, 2D1383)
- 265. Milovskiy, N.D., and N.Yu. Rusov (0). Study on the processes for forming a transverse monochromatic beam structure in a nonlinear active medium with inhomogeneous absorption. Sb 12, 325-328.

  (RZhF, 1/82, 1Zh32)

- 266. Milovskiy, N.D., N.Yu. Rusov, and T.V. Yastrebova (94). Propagation of a beam in an active medium with resonant and Kerr nonlinearity.

  IVUZ Radiofiz, no. 2, 1982, 148-156.
- 267. Malakhov, A.N., and A.I. Saichev (0). Reversal of a wave reflected by a wavefront reversal mirror in a nonlinear inhomogeneous medium.

  Sb 12, 321-324. (RZhF, 2/82, 2D1600)
- 268. Nasyrov, K.A. (193). <u>Polarization instability of radiation in a two-way amplifier</u>. Sb 2, 133-136.
- 269. Pieczonkova, A., and J. Perina (NS). Statistical properties of Brillouin scattering. CJP, v. B31, no. 8, 1981, 837-856.

  (RZhF, 2/82, 2D408)
- 270. Polkovníkov, B.F., and G.G. Telegin (0). Seventh All-Union Vavilov

  Conference on Nonlinear Optics, Novosibirsk, 22-25 June 1981.

  KE, no. 2, 1982, 441-448.
- 271. Semenets, T.I. (5). <u>Self-diffraction of light during vibrational-rotational transitions in molecules</u>. UFZh, no. 2, 1982, 184-188.
- 272. Shvartsburg, A.B. (0). Nonlinear retuning of localized wave fields in a plasma. Sb 13, 224-258.
- 273. Taenzler, W., and F.J. Schuette (NS). Statistics in a trilinear interacting Stokes-anti-Stokes boson system. Annalen der Physik, no. 1, 1981, 73-79. (RZhF, 1/82, 1D1525)

- 274. Toptygina, G.I., and E.Ye. Fradkin (12). Theory on the subradiation structure of absorption during the interaction of two strong waves in a nonlinear medium. ZhETF, no. 2, 1982, 429-440.
- 275. Veklenko, B.A. (19). Statistics of resonance radiation reflected from excited media. Tr 4, 3-10. (RZhF, 2/82, 2D1638)
- 276. Vlasov, S.N. (0). Space-time instability of a plane wave in a periodic nonlinear system. Sb 12, 99-102. (RZhF, 1/82, 1Zh22)
- 277. Vorontsov, M.A., D.V. Pruidze, and V.I. Shmal'gauzen (2). Study on processes of thermal blooming by the statistical characteristics of the scattering field. KE, no. 2, 1982, 400-402.
- 278. Yerokhin, N.S., and S.S. Moiseyev (0). Problems of nonlinear transformation and self-focusing of waves in an inhomogeneous plasma.

  Sb 13, 195-223.
- 279. Zakharov, S.M., and E.A. Manykin (16). <u>Inverse problem method for scattering in optical echo theory</u>. ZhETF, v. 82, no. 2, 1982, 397-405.
- C. SPECTROSCOPY OF LASER MATERIALS
  - 280. Abdurazakov, A., V.A. Antonov, and P.A. Arsen'yev (0). Thermoluminescence and thermally induced currents in YAG single crystals doped with neodymium. ZhPS, v. 36, no. 1, 1982, 26-30.

- 281. Arkhangel'skaya, V.A. (0). Luminescence and thermal and photochemistry of displaced color centers in fluorite crystal with alkali impurities. IAN Fiz, no. 2, 1982, 295-299.
- 282. Artamonov, V.V., M.Ya. Valakh, A.P. Litvinchuk, and N.I. Vitrikhovskiy

  (0). Resonant Raman scattering in Mg Cd 2 Se mixed crystals. ZhPS,

  v. 36, no. 1, 1982, 105-111.
- 283. Borisevich, N.A., and V.V. Gruzinskiy (3). <u>Luminescence of free</u>

  <u>complex molecules under electronic excitation</u>. IAN Fiz, no. 2,

  1982, 399-405.
- 284. Lebedeva, N.S., N.A. Kuznetsova, O.L. Kaliya, and Ye.A. Luk'yanets

  (0). Modeling of photochemical processes occurring during pulsed

  irradiation of ethanol solutions of rhodamine 6G. ZhPS, v. 36,

  no. 1, 1982, 150-152.
- 285. Rubinov, A.N., B.A. Bushuk, and A.N. Krasovskiy (0). Nonresonant quenching of fluorescence in dye solutions by picosecond light pulses.

  ZhPS, v. 36, no. 1, 1982, 36-39.
- 286. Tkachuk, A.M. (0). Luminescence in concentrated crystals of rareearth compounds. IAN Fiz, no. 2, 1982, 242-248.
- H. ULTRASHORT PULSE GENERATION
  - 287. Bareyka, G., and B. Sirutkaytis (0). Study on the effect of passive modulators on the parameters of ultrashort pulse generation in a phosphate glass laser. Sb 14, 101. (RZhRadiot, 1/82, 1Ye72)

- 288. Bogdanova, M.V., Yu.G. Khronopulo, and Ye.I. Yakubovich (174).

  Steady-state ultrashort pulses in resonant molecular media.

  ZhETF, v. 82, no. 2, 1982, 421-428.
- 289. Kovalenko, Ye.S., and V.K. Savitskiy (0). Source of picosecond light pulses with a high repetition rate. Sb 1, 139-140. (RZhRadiot, 1/82, 1Ye69)
- 290. Narovlyanskaya, N.M., and Ye.A. Tikhonov (5). Optimal operation of saturable absorbers in mode-locked lasers. KE, no. 1, 1982, 60-66.
- J. CRYSTAL GROWING
  - 291. Alimov, D.T., Sh. Atabayev, F.V. Bunkin, V.L. Zhuravskiy, N.A.
    Kirichenko, B.S. Luk'vanchuk, A.I. Omel'chenko, and P.K. Khabibullayev
    (0). Growth of giant crystals in an oxidizing atmosphere under
    laser radiation. ZhTF P, no. 1, 1982, 10-12.
  - 292. Golubev, L.V., S.V. Novikov, and Yu.V. Shmartsev (4). <u>Conductivity-type inversion in silicon-doped GaAs during growth using electroliquid epitaxy</u>. ZhTF, no. 1, 1982, 48-51.
- K. THEORETICAL ASPECTS OF ADVANCED LASERS
  - 293. Baryshevskiy, V.G. (87). <u>Nuclear reactions in an optical wave</u>.

    ZhTF P, no. 3, 1982, 136-138.
  - 294. Ginzburg, N.S., M.I. Petelin, and M.A. Shapiro (0). Automodulation and stochastic oscillation regimes in resonant relativistic electron masers. Sb 11, M2. (RZhF, 1/82, 1683)

- 295. Kondratenko, A.M., and Ye.L. Saldin (79). Linear theory on a free electron laser with a Fabry-Perot resonator. 2hTF, no. 2, 1982, 309-317.
- 296. Oganesyan, K.B., and M.L. Petrosyan (146). Magnetic fields of spiral wigglers. Yerevanskiy fizicheskiy institut. Preprint, no. 475/18, 1981, 22 p. (RZhF, 1/82, 1D1297)
- 297. Vertiy, A.A., and V.P. Shestopalov (15). Polarization effects in diffraction radiation generators--free electron lasers. DAN SSSR, v. 262, no. 5, 1982, 1124-1127.
- 298. Yevdokimenko, Yu.I., K.A. Lukin, and V.P. Shestopalov (15). Lasing

  hysteresis phenomena in diffraction radiation generators—free electron

  lasers. ZhTF, no. 1, 1982, 132-134.

### L. GENERAL LASER THEORY

- 299. Atroshchenko, V.I., Yu.Kh. Guketlev, I.V. Demenik, N.A. Kozlov, B.A. Konstantinov, and A.G. Kostin (0). Liquid laser. Otkr izobr, no. 4, 1982, 793262.
- 300. Atroshchenko, V.I., I.V. Demenik, N.A. Kozlov, V.A. Kenstantinov, and A.G. Kostin (0). Liquid laser. Othr izobr, no. 4, 1982, 793263.
- 301. Averbukh, I.Sh. (44). Molecular systems in a field of optical resonance radiation. Institut prikladnoy fiziki AN MSSR.

  Dissertation, 1980, 19 p. (KLDVAD, 2/82, 2012)

- 302. Bandilla, B.A., and H.H. Ritze (NS). <u>Double-mode two-photon</u>

  absorption and enhanced photon antibunching due to interference.

  Annalen der Physik, no. 2, 1981, 123-136. (RZhF, 2/82, 2D1356)
- 303. Bogdanov, Ye.I. (87). Quantum theory of optical resonance.

  Belorusskiy GU. Dissertation, 1981, 16 p. (KLDVAD, 2/82, 2022)
- 304. Bogolyubov, N.N., Fam Le Kiyen, and A.S. Shumovskiy (52). <u>Kinetic</u>

  equations for a two-level system interacting with an electromagnetic

  field. Ob"yedinennyy institut yadernykh issledovaniy. Preprint,

  no. R17-81-465, 1981, 12 p. (RZhF, 2/82, 2D1360)
- 305. Boksha, O.N., I.M. Brisova, and T.M. Varina (0). Nature of published

  literature on luminescence. IAN Fiz, no. 2, 1982, 406-410.
- 306. Dorkin, A.S., and Yu.B. Il'in (19). Analog simulation of pulsed signal generators in the optical range. Tr 5, 34-38. (RZhRadiot, 2/82, 2Ye20)
- 307. Dul'nev, G.N., and S.I. Khankov (30). Thermal deformation of the active element in a solid state laser with natural cooling. I-FZh, v. 42, no. 1, 1982, 85-91.
- 308. Dul'nev, G.N., B.A. Yermakov, and S.I. Khankov (0). Analytical method for evaluating thermal processes and their effect on lasing in a solid-state laser with natural cooling. I-FZh, v. 42, no. 2, 1982, 307-313.
- 309. Dzhibladze, M.I., L.Ye. Lazarev, and E.Sh. Teplitskiy (40). Effect of field distribution instability on the lasing kinetics of a laser.
  Tr 1, 95-113. (RZhRadiot, 2/82, 2Yel9)

- 310. Galun, S.A., and A.V. Zyul'kov (0). Detection of an optical image with an unknown size. Sb 8, 78-84. (RZhRadiot. 2/82, 2Yel8)
- 311. Gordov, Ye.P., G.A. Koganov, and A.M. Khazanov (78). <u>Semiclassical</u>

  <u>met'tod in the quantum theory of lasers</u>. Institut optiki atmosfery

  SOAN. Preprint, no. 37, 1981, 19 p. (RZhF, 2/82, 2D1414)
- 312. Jankiewicz, Z., and Z. Trzesowski (NS). <u>Possibilities of laser</u>
  generation using programmed modulation of resonator losses. BAPS,
  no. 3-4, 1980, 143-157. (RZhRadiot, 2/82, 2Yel6)
- 313. Kraynov, V.P. (12). <u>Two-level atom in a strong light field</u>.

  Leningradskiy GU. Dissertation, 1981, 16 p. (KLDVAD, 2/82, 2000)
- 314. Kryuchkov, G.Yu. (0). Resonance scattering of light by a perturbed atomic system. DAN Arm, no. 2, 1981, 109-113. (RZhF, 1/82, 1D1285)
- 315. Martynenko, Yu.P., G.V. Bayev, A.A. Kutarev, M.F. Stel'makh, V.A.

  Pashkov, I.I. Kuratev, A.P. Yegorushkin, L.S. Muratov, and V.I. Bilak

  (0). Laser. Otkr izobr, no. 2, 1982, 11545.
- 316. Mohr, U. (NS). Saturated multiphoton absorption of a nonmonochromatic quantized field. Annalen der Physik, no. 2, 1981, 152-165. (RZhF, 2/82, 2D1358)
- 317. First National Symposium on Physics and the Development of

  Electronics, Plovdiv, Bulgaria, 1-3 November 1980. Fizikomatematichesko spisanie, no. 1, 1981, 3-8. (RZhF, 1/82, 1A34)

- 318. Novgorodov, M.Z., N.N. Sobolev, and E.S. Chokoyev (1). <u>Laser</u>.

  Otkr izobr, no. 4, 1982, 784682.
- 319. Ryazanov, M.I. (0). Coherent photon emission by fast particles in excited matter. Fizika elementarnykh chastits i atomnogo yadra, no. 5, 1981, 1035-1069. (RZhF, 1/82, 1Yel091)
- 320. Slin'ko, Ye.F. (2). Intrinsic fluctuations in traveling wave laser radiation in a direction opposite the strong field. KE, no. 2, 1982, 407-409.
- 321. Stepanov, A.A., and V.A. Shcheglov (1). Saturation effect of optical transitions in high-power molecular lasers under nonstationary pumping conditions. Fizicheskiy institut AN SSSR. Preprint, no. 104, 1981, 29 p. (RZhF, 1/82, 1D1305)
- 322. Steudel, H. (NS). Radiation properties of systems of three and four continuously pumped atoms. Annalen der Physik, no. 2, 1981, 97-105. (RZhF, 2/82, 2D1361)
- 323. Voigt, H., and A. Bandilla (NS). Density matrix for single-mode

  light after k-photon absorption. Annalen der Physik, no. 2, 1981,

  137-152. (RZhF, 2/82, 2D1355)

# II. LASER APPLICATIONS

### A. BIOLOGICAL EFFECTS

- 324. Abdvakhitova, A.K., L.N. Grigor'yeva, and I.M. Parkhomenko (2).

  Effect of laser radiation on Chinese hamster cells cultivated
  in vitro. Radiobiologiya, no. 1, 1982, 40-43.
- 325. Fedorov, S.N., Ya.I. Glinchuk, A.D. Semenov, and V.D. Zakharov (664).

  Removal of the vitreous humor and laser intervention in complicated diabetic retinopathy. Oftal'mologicheskiy zhurnal, no. 1, 1982, 44-47.
- 326. Karu, T.Y., G.S. Kalendo, and V.S. Letokhov (72,625). Effect of

  low-intensity visible radiation from a copper laser on a culture of

  HeLa cells. KE, no. 1, 1982, 141-144.
- 327. Karu, T.Y., G.S. Kalendo, V.S. Letokhov, and V.V. Lobko (614,72,625).

  Reaction of proliferating and resting tumor cells to low-intensity

  periodic pulsed UV laser radiation. DAN SSSR, v. 262, no. 6, 1982,

  1498-1501.
- 328. Kasumov, B.G. (665). Study on the separate and combined effect of
  laser and x-radiation on the mutability in strains of heterochromosome
  types of cotton. Institut genetiki i selektsii AN AzSSR. Dissertation,
  1981, 30 p. (KLDVAD, 1/82, 739)
- 329. Nikogosyan, D.N. (72). <u>Lasers and DNA</u>. Priroda, no. 2, 1982, 77-87.

330. Yeliseyenko, V.I., O.K. Skobelkin, and Ye.I. Brekhov (0). Healing characteristics of laser-coagulated acute hemorrhaging gastric ulcers. Byulleten' eksperimental'noy biologii i meditsiny, no. 1, 1981, 106-108.

### B. COMMUNICATIONS SYSTEMS

- 331. Andriyesh, A.M., Yu.A. Bykovskiy, Yu.N. Kul'chin, V.V. Ponomar', and V.L. Smirnov (16). Study on As<sub>2</sub>S<sub>3</sub> optical fibers for planar and cylindrical waveguide-compatible devices. KE, no. 1, 1982, 25-32.
- 332. Babkina, T.V. (15). Transfer function for a system of stepped fiber-optic lightguides connected in series. KE, no. 2, 1982, 383-386.
- 333. Belovolov, M.I., Ye.M. Dianov, A.A. Kuznetsov, A.S. Svakhin, V.A. Sychugov, and T.V. Tulaykova (1). Demultiplexer for spectrally multiplexed channels based on a lightguide plate. KE, no. 2, 1982, 429-432.
- 334. Budkin, L.A., V.P. Morozov, and A.I. Pikhtelev (0). <u>Transmission of</u>

  a stable frequency along fiber-optic communication lines. Sb 4,

  97-98. (RZhRadiot, 2/82, 2Ye351)
- 335. Dedlovskiy, M.M., I.P. Korshunov, R.F. Matveyev, and V.N. Tutubalin
  (0). Study on intermode dispersion in optical fibers, using
  correlation analysis of the radiation field. RiE, no. 2, 1982,
  220-232.
- 336. Deryugin, L.N. (0). Feasibility, limits and development problems for planar waveguide optics. IVUZ Radioelektr, no. 2, 1982, 4-20.

- 337. Gan'shin, V.A., M.E. Kubrinskaya, and V.A. Petrova (119).

  Characteristics for reconstructing various distributions of the refractive index in gradient lightguides. ZhTF, no. 2, 1982, 394-396.
- 338. Korol'kovas, L.T., V.L.V. Rubazhyavichyus, S.A. Stanyavichyus, and E.M. Suveyzdis (0). Choosing the criteria for evaluating the quality of electrophotographic microimaging produced by computer. ZhNiPFiK, no. 1, 1982, 38-45.
- 339. Kowalski, A., R. Wrona, and J. Kaim (NS). <u>Integrated optical</u>
  transceiving device. Patent Poland, no. 108411, 29 Nov 1980.
  (RZhRadiot, 1/82, 1Ye378)
- 340. Martynova, T.A., G.A. Cherenkov, and V.V. Shevchenko (0). <u>Multiple</u>
  overlap in optical lines. RiE, no. 1, 1982, 11-19.
- 341. Morshnev, S.K., and A.V. Frantsesson (15). Transmission of optical radiation at sharp bends in fiber lightguides. KE, no. 2, 1982, 284-291.
- 342. Shchepina, N.S. (19). <u>Propagation of directed coherent light beams</u>
  along functional lightguides. Tr 4, 78-80. (RZhF, 1/82, 1D416)
- 343. Vechkanov, N.N., A.A. Gur'yanov, G.G. Devyatykh, Ye.M. Dianov, V.G. Plotnichenko, I.V. Sktipachev, V.K. Sysoyev, and M.F. Churbanov (1,297). <u>IR fiber-optic lightguides made of chalcogenide glass</u>. KE, no. 2, 1982, 438-440.

- 344. Zatykin, A.A., S.K. Morshnev, and A.V. Frantsesson (0). <u>Bunching of the output radiation from a sharply-bent fiber lightguide</u>. ZhTF P, no. 2, 1982, 97-100.
- 345. Zolotov, Ye.M., P.G. Kazanskiy, and A.M. Prokhorov (1). Study on coupling a channeled waveguide in LiNbO<sub>3</sub> to a single-mode fiber.

  KE, no. 1, 1982, 165-168.

### C. BEAM PROPAGATION

### 1. In the Atmosphere

- 346. Abramochkin, A.I., B.S. Kostin, Ye.V. Motoshin, I.E. Naats, Yu.P. Polunin, A.N. Soldatov, and A.A. Tikhomirov (0). Multiwave lidar study on the spectral behavior of the aerosol backscattering coefficient in the surface boundary layer. Sb 15, 16-21.

  (RZhRadiot, 1/82, 1Ye337)
- 347. Aksenov, V.P., and V.A. Banakh (0). Average intensity of laser radiation scattered by a corner reflector in a turbulent atmosphere.

  Sb 16, 67-70. (RZhRadiot, 1/82, 1Ye357)
- 348. Aleshkevich, V.A., S.I. Dremina, S.S. Lebedev, and A.N. Matveyev (2).

  Thermal blooming of a multimode light beam in a turbulent medium.

  KE, no. 1, 1982, 134-140.
- 349. Al'tman, E.L., V.A. Ionov, I.M. Nazarov, G.B. Sveshnikov, and Yu.P. Turunov (350). Modern methods for determining iodine in the atmosphere. Tr 6, 88-97.

- 350. Amanov, S.A., Yu.M. Petrov, A.V. Tsyganskiy, and B.B. Chen (0).

  Some data on the relationship of intensity fluctuations of laser radiation with the boundary layer. Sb 16, 42-44. (RZhRadiot, 1/82, 1Ye344)
- 351. Amanov, S.A., Yu.M. Petrov, A.V. Tsyganskiy, and B.B. Chen (0).

  Dependence of the intensity fluctuations of laser radiation on the state of the boundary layer. Sb 16, 45-47. (RZhRadiot, 1/82, 1Ye345)
- 352. Aref'yev, V.N., V.I. Dianov-Klokov, V.M. Ivanov, and N.I. Sizov (0).

  Absorption of tunable CO<sub>2</sub> laser radiation by water vapor. Sb 1,

  47-48. (RZhRadiot, 2/82, 2Ye541)
- 353. Ashkinadze, D.A., B.B. Vilenchits, and G.A. Dubrov (0). <u>Device for remote study on the molecular components of the atmosphere</u>. Sb 1, 103-105. (RZhRadiot, 2/82, 2Ye562)
- 354. Ayvazyan, Yu.M., V.M. Bayev, T.P. Belikova, S.A. Kovalenko, E.A. Sviradenkov, A.F. Suchkov, and D.D. Toptygin (0). Absorption spectrum of the atmosphere in the 602-627 nm range obtained by intracavity

  laser spectroscopy with a sensitivity of 10<sup>-9</sup> cm<sup>-1</sup>. Sb 1, 39-41.

  (RZhRadiot, 2/82, 2Ye565)
- 355. Bagayev, S.N., A.S. Dychkov, and V.P. Chebotayev (0). <u>Variation in the line shape of laser radiation during passage through the atmosphere</u>. Sb 1, 97. (RZhRadiot, 2/82, 2Ye446)

- 356. Banakh, G.F., O.K. Voytsekhovskaya, I.I. Ippolitov, Yu.S. Makushkin, and O.N. Sulakshina (0). Possibilities of probing various gas impurities of an industrial origin in the earth's atmosphere.

  Sb 1, 12-15. (RZhRadiot, 1/82, 1Ye440)
- 357. Banakh, V.A., V.M. Buldakov, and V.L. Mironov (0). <u>Intensity</u>

  fluctuations of a partially coherent light beam in a turbulent

  atmosphere. Sb 16, 13-16. (RZhRadiot, 2/82, 2Ye431)
- 358. Belen'kiy, M.S., and A.P. Shelekhov (0). Phase fluctuations during focusing of light in a turbulent atmosphere. Sb 16, 24-27.

  (RZhRadiot, 2/82, 2Ye428)
- 359. Belen'kiy, M.S., V.V. Pokasov, V.M. Sazanovich, and R.Sh. Tsvyk (0).

  Longitudinal refocusing of light caused by scattering in random
  inhomogeneities. Sb 16, 35-37. (RZhRadiot, 1/82, 1Ye355)
- 360. Belen'kiy, M.S., and V.L. Mironov (78). Phase fluctuations in a multimode laser field in a turbulent atmosphere. KE, no. 1, 1982, 9-13.
- 361. Belov, M.L., V.M. Orlov, and A.F. Ovcharenko (0). Automation of laser measurements of the characteristics of natural objects.

  Sb 1, 165-166. (RZhRadiot, 1/83, 1Ye434)
- 362. Belov, M.L., V.M. Orlov, and A.F. Ovcharenko (0). Recording of an echo signal in laser correlation systems. Sb 1, 167-169.

  (RZhRadiot, 1/82, 1Ye380)

- 363. Belov, M.L., V.M. Orlov, and A.F. Ovcharenko (0). Characteristics of a laser signal in a turbulent atmosphere over a path with reflection. Sb 16, 96-98. (RZhRadiot, 2/82, 2Ye437)
- 364. Belov, M.L., V.M. Orlov, and A.F. Ovcharenko (0). Random errors in a phase angle-data transmitter in a turbulent atmosphere. Sb 16, 103-105. (RZhRadiot, 2/82, 2Ye432)
- 365. Belyayev, Ye.B., A.P. Godlevskiy, A.F. Zhukov, Yu.D. Kopytin, Yu.V.

  Ivanov, V.A. Korol'kov, and R.Sh. Tsvyk (0). <u>Initiation of nonlinear</u>

  transmission and optical breakdown in a turbulent atmosphere by CO<sub>2</sub>

  laser pulses. Sb 16, 126-128. (RZhRadiot, 1/82, 1Ye353)
- 366. Beresnev, S.A., and V.G. Chernyak (0). Motion of small aerosol

  particles in an electromagnetic radiation field. Sb 16, 162-165.

  (RZhRadiot, 2/82, 2Ye436)
- 367. Boronoyev, V.V. (132). Spatial coherence and field intensity fluctuations of a narrow collimated laser beam in a turbulent atmosphere. Tomskiy GU. Dissertation, 1980, 18 p. (KLDVAD, 1/82, 438)
- 368. Burmistrov, A.S., and A.I. Popov (0). Study on the sensitivity of an intracavity method for determining the concentration of CH<sub>4</sub> in the atmosphere by an analyzer with a c-w laser. Sb 1, 66-69.

  (RZhRadiot, 2/82, 2Ye567)

- of the absorption line contour of water vapor, studied by a multimode pulsed laser under the action of an external variable electric field.

  Sb 1, 98-100. (RZhRadiot, 1/82, 17e420)
- 370. Denisenko, A.I., A.N. Kuznetsov, A.G. Madatov, V.B. Odnorozhenko, and V.I. Tverdokhlebov (0). Determining the distribution function by the sizes of aerosol particles. Sb 1, 151-153. (R2hRadiot, 2/82, 2Ye564)
- 371. Deryugin, I.A., A.L. Vol'pov, Yu.A. Zimin, V.I. Metel'skiy, and G.A. Travin (0). <u>Interferometric studies under atmospheric conditions</u>.
  Sb 16, 28-31. (RZhRadiot, 2/82, 2Ye429)
- 372. Drofa, A.S. (0). <u>Light scattering function in a cloud medium</u>.

  Sb 15, 182-185. (RZhRadiot, 1/82, 1Ye327)
- 373. Dzhidzhoyev, M.S., V.Ya. Panchenko, V.K. Popov, I.M. Sizova, A.P. Sukhorukov, and A.P. Chugunov (0). Nonlinear optics of the stratosphere and laser chemistry of ozone. Sb 1, 3-11.

  (RZhRadiot, 1/82, 1Ye326)
- 374. Gavrikov, V.K., and V.G. Korenev (0). Recording of distortions in the time structure of an optical pulse passing through an aerosol layer. Sb 15, 165-167. (RZhRadiot, 1/82, 1Ye331)
- 375. Gavrilovich, A.B., P.Ya. Ganich, and A.P. Ivanov (0). Optical transmission function for modeling a cloud layer using linearly polarized light. ZhPS, v. 36, no. 1, 1982, 119-122.

- 376. Gendrin, A.G., I.V. Zakharov, A.N. Kalinenko, V.S. Komarov, and V.V.

  Fomin (78). Software for operative calculations of the optical

  characteristics of the atmosphere. Sb 1, 24-27. (RZhRadiot,

  1/82, 1Ye439)
- 377. Gerasimchuk, A.G., S.T. Kornilov, Ye.D. Protsenko, and S.N. Chirikov

  (16). Tunable waveguide CO<sub>2</sub> laser for monitoring atmospheric

  pollutants. KE, no. 1, 1982, 169-171.
- 378. Gordin, M.P., L.I. Gordina, and G.M. Strelkov (0). Effect of atmospheric turbulence on thermal distortions of a laser beam.

  Sb 12, 167-170. (RZhF, 1/82, 12h128)
- 379. Gordin, M.P., V.P. Sadovnikov, and G.M. Strelkov (0). Thermal self-action of laser pulses in the atmosphere. Sb 16, 170-174. (RZhRadiot, 2/82, 2Ye442)
- 380. Gubkin, S.A., V.M. Osadchiy, R.Sh. Tsvyk, A.P. Cherepanov, and I.Ya. Shapiro (0). The "Irsan-2" laser instrument for measuring the random and regular components of optical refraction. Sb 1, 161-164.

  (RZhRadiot, 1/82, 1/8341)
- 381. Gubskoy, V.I., M.G. Dzagnidze, A.N. Borodavka, N.S. Klopkov, A.V. Vasil'yev, M.R. Konon, A.S. Slesar', and L.A. Naumovich (0).
  Information and measuring system for experiments on the study of laser radiation reflected by the atmosphere. Sb 1, 183-186.
  (RZhRadiot, 1/82, 1Ye342)

- 382. Ippolitov, I.I., S.I. Dolgiy, G.S. Khmel'nitskiy, and S.F. Shubin (0).

  Study on the attenuation of laser radiation in the atmosphere of

  Moscow at the time of the Olympics. Sb 1, 62-65. (RZhRadiot,
  1/82, 1Ye338)
- 383. Ivanov, A.P., and A.I. Kolesnik (0). Degree of polarization of
  light passing through a turbid layer. Sb 15, 168-171. (RZhRadiot,
  1/82, 1Ye330)
- 384. Ivanov, A.P., F.P. Osipenko, I.S. Khutko, and A.P. Chaykovskiy (3).

  Optical characteristics of cirrostratus clouds. FAiO, no. 2,

  1982, 193~196.
- 385. Ivanov, N.V., B.V. Kaul', V.P. Korchuganov, G.S. Nasekin, and I.V. Samokhvalov (0). Attenuation of optical radiation in an urban atmosphere, dependent on the dust content of the air.

  103-105. (RZhRadiot, 1/82, 1Ye336)
- 386. Konyayev, P.A., and V.P. Lukin (0). Adaptive focusing of limited beams in a turbulent atmosphere. Sb 16, 91-95. (RZhRadiot, 2/82, 2Ye438)
- 387. Korenev, V.G. (0). Time broadening of an optical pulse in a confined mass of artificial fog. Sb 15, 162-164. (RZhRadiot, 1/82, 1Ye332)
- 388. Kozlov, S.D., A.S. Makarov, S.O. Mirumyants, and V.L. Filippov (0).

  Study on the transparency of the atmosphere in the 479-1160 cm<sup>-1</sup>

  range. Sb 15, 82-85. (RZhRadiot, 1/82, 1Ye348)

- 389. Kruchenitskiy, G.M. (0). <u>Turbulent broadening of a source image in</u> the focal plane of a lens. Sb 16, 17-19. (RZhRadiot, 1/82, 1Ye352)
- 390. Kugeyko, M.M., N.M. Sergeyev, and D.A. Ashkinadze (0). <u>Instrument</u> for measuring the attenuation parameters of laser radiation in the atmosphere. Sb 1, 145-148. (RZhRadiot, 1/82, 1Ye339)
- 391. Kuz'min, V.N., and V.A. Babenko (0). Attenuation of light by model

  crystal particles of atmospheric dust. Sb 15, 109-112. (RZhRadiot,

  1/82, 1Ye334)
- 392. Kuz'min, V.N., and V.A. Babenko (0). Angular characteristics of light scattering by model crystal particles of atmospheric dust.

  Sb 15, 113-116. (RZhRadiot, 1/82, 1Ye333)
- 393. Kuznetsov, A.N., V.B. Odnorozhenko, and V.I. Tverdokhlebov (0).

  Laser study on aerosol particles. Sb 1, 149-150. (RZhRadiot, 1/82, 1Ye436)
- 394. Lukin, I.P. (0). Evaluating the accuracy for measuring the velocity of objects moving in a turbulent layer. Ois, v. 52, no. 1, 1982, 108-111.
- 395. Lopasov, V.P., S.B. Ponomareva, Yu.N. Ponomarev, and B.A. Tikhomirov (0). Spectroscopic and relaxation parameters used for predicting nonlinear propagation of laser radiation in the atmosphere, as a function of meteorological parameters. Sb 1, 53-54. (RZhRadiot, 2/82, 2Ye566)

- 396. Lukin, V.P., and M.I. Charnotskiy (0). <u>Using the mutuality of fluctuations for the adaptive control of optical wave parameters</u>.

  Sb 16, 83-87. (RZhRadiot, 1/82, 1Ye358)
- 397. Lukin, V.P., and V.V. Pokasov (0). Adaptive correction of fluctuations of spatially-limited optical beams. Sb 16, 231-242. (RZhRadiot, 2/82, 2Ye444)
- 398. Maslich, D.I., L.S. Khizhak, and N.D. Yosipchuk (0). Calculating the turbulence ratio by results of geodetic and meteorological measurements. Sb 16, 118-121. (RZhRadiot, 1/82, 1Ye441)
- on the effect of a turbulent atmosphere on the contrast and period of interference in a laser Coppler velocimeter. Sb 16, 51-54.

  (RZhRadiot, 1/82, 1Ye438)
- distribution of the transparency coefficient of the atmosphere.

  Sb 15, 106-108. (RZhRadiot, 1/82, 1Ye335)
- 401. Molodtsov, S.N. (0). Correctness of a geometrooptic description of frequency correlation of optical radiation propagating in a turbulent atmosphere. Sb 16, 9-12. (RZhRadiot, 2/82, 2Ye430)
- 402. Monastyrnyy, Ye.A., G.Ya. Patrushev, and V.V. Pokasov (0). <u>Time</u>

  characteristics of the fluctuations in the level of a Gaussian beam
  in a fluctuating wind. Sb 16, 20-23. (RZhRadiot, 1/82, 1Ye354)

- 403. Myakinin, V.A., and N.S. Tikhonova (0). Experimental study on the spatial structure of a laser pulse in a turbulent medium. Sb 16, 211-212. (RZhRadiot, 1/82, 1Ye346)
- of wind velocity by a laser Doppler anemometer. Sb 16, 48-50.

  (RZhRadiot, 1/82, 1Ye437)
- 405. Nosov, V.V., V.N. Poplaukhin, and E.A. Trubacheyev (0). Method for measuring displacement fluctuations of optical images in the boundary layer. Sb 16, 38-41. (RZhRadiot, 1/82, 1Ye343)
- 406. Orlov, V.M. (78). Scattering of optical radiation in a turbulent atmosphere. Sb 17, 21-29.
- 407. Orlov, V.M., A.N. Kozhevnikov, and G.G. Matviyenko (78). Energy characteristics of an echo signal in an aerosol atmosphere.

  Sb 17, 30-56.
- 408. Orlov, V.M., and M.L. Belov (78). Average energy characteristics of an echo signal in a turbulent atmosphere. Sb 17, 56-78.
- 409. Orlov, V.M., and M.L. Belov (78). Spacial and time fluctuations of an echo signal in a turbulent atmosphere. Sb 17, 79-113.
- 410. Orlov, V.M., A.N. Kozhevnikov, G.G. Matviyenko, and I.V. Samokhvalov (78). Back-scattering noise. Sb 17, 114~142.
- 411. Orlov, V.M. (78). Background noise. Sb 17, 142-149.

- 412. Orlov, V.M., G.G. Matviyenko, and M.L. Belov (78). Effect of the atmosphere on the energy and accuracy characteristics of optical ranging systems. Sb 17, 173-185.
- 413. Patrushev, G.Ya., A.I. Petrov, and V.V. Pokasov (0). Intensity

  fluctuations in a mirror reflection of optical beams in a turbulent

  atmosphere. Sb 16, 63-66. (RZhRadiot, 1/82, 1Ye356)
- 414. Popov, A.I., and A.V. Sadchikhin (0). Study on the possibility of monitoring NO and SO<sub>2</sub> air pollution by He-Ne and He-Xe lasers.

  Sb 1, 70-72. (RZhRadiot, 1/82, 1Ye435)
- 415. Potapov, R.I. (653). Lidar recording device. Sb 18, 75-85.
- 416. Pustovalov, V.K., G.S. Romanov, and I.A. Khorunzhiy (334). Clearing of polydispersed aqueous aerosols by laser radiation. KE, no. 2, 1982, 332-343.
- 417. Redichkin, N.N. (0). Method for determining the angles of refraction by the measured zenith distances and azimuths of reference stars.

  Sb 16, 110-113. (RZhRadiot, 1/82, 1Ye351)
- 418. Rogachevskiy, A.G. (0). Propagation of narrow light beams in precipitation. Sb 15, 212-214. (RZhRadiot, 2/82, 2Ye441)
- 419. Samokhvalov, I.V., G.G. Matviyenko, and V.M. Orlov (78). Scattering of optical radiation in an aerosol atmosphere. Sb 17, 6-20.
- 420. Samokhvalov, I.V., and G.G. Matviyenko (78). Polarization properties of scattered light. Sb 17, 149-172.

- 421. Samokhvalov, I.V., and M.L. Belov (78). Remote monitoring of the optical state of the atmosphere. Sb 17, 185-205.
- 422. Samokhvalov, I.V., and A.A. Tikhomirov (0). Methods for compressing the dynamic range of lidar signals. Sb 1, 170-171. (RZhRadiot, 1/82, 1Ye381)
- 423. Surkin, R.I., A.L. Bortnichuk, L.A. Shekhtman, L.M. Sverdlov, and

  V.A. Torgovichev (0). Device for studying the molecular composition

  of the atmosphere and the interaction of laser radiation with gaseous

  air pollutants. Sb 1, 75-77. (RZhRadiot, 2/82, 2Ye561)
- 424. Tokarev, O.D., T.P. Toropova, and M.A. Derbisalin (0). Scattering index of laser light in the surface boundary layer in the region of small and large angles of scattering. Sb 15, 63-66. (RZhRadiot, 1/82, 1Ye349)
- 425. Uvarov, A.D. (0). <u>Propagation of laser radiation in aerosuspensions</u>
  of aluminum particles. Sb 16, 137-139. (RZhRadiot, 2/82, 2Ye435)
- 426. Vasil'yev, I.I., G.I. Il'in, and Yu.Ye. Pol'skiy (0). The Pivach

  0.3-30 instrument for measuring the sizes of aerosol particles.

  Sb 1, 129-131. (RZhRadiot, 2/82, 2Ye563)
- 427. Vdovin, V.A., and Yu.M. Sorokin (0). Collective conditions for

  low-threshold optical breakdown and numerical solution of the inverse

  problem of the dynamics of a laser spark. Sb 16. 129-132.

  (RZhRadiot, 2/82, 2Ye559)

- 428. Vilenchits, B.B., D.A. Ashkinadze, and V.K. Popov (0). <u>Device for approximate analysis of atmospheric air</u>. Sb 1, 106-109.

  (RZhRadiot, 1/82, 1Ye442)
- 429. Volnistova, L.P., A.S. Drofa, and V.P. Snykov (0). Study on the transfer of an optical image through fog. Sb 15, 186-189.

  (RZhRadiot, 1/82, 1Ye325)
- 430. Vorob'yev, V.V. (0). Intensity fluctuations of narrow laser beams
  in a turbulent medium. Sb 16, 3-5. (RZhRadiot, 1/82, 1Ye359)
- 431. Vorontsov, M.A., K.D. Yegorov, V.P. Kandidov, S.S. Chesnokov, and V.I. Shmal'gauzen (0). Problems of shaping light beams in the atmosphere. Sb 15, 3-11. (RZhRadiot, 2/82, 2Ye426)
- 432. Vostretsov, N.A., A.F. Zhukov, M.V. Kabanov, and R.Sh. Tsvyk (0).

  Dispersion of intensity fluctuations of laser radiation in a

  snowfall. Sb 15, 204-207. (RZhRadiot, 1/82, 1Ye328)
- 433. Vostretsov, N.A., A.F. Zhukov, M.V. Kabanov, and R.Sh. Tsvyk (0).

  Time-resolved frequency spectrum of laser radiation fluctuations in
  a snowfall. Sb 15, 208-211. (RZhRadiot, 1/82, 1Ye329)
- 434. Voytsekhovskaya, O.K., L.I. Nesmelova, O.B. Rodimova, O.N. Sulakshina, Yu.S. Makushkin, and S.D. Tvorogov (0). <u>Absorption coefficient of light in the 1.4 μm band wing of CO<sub>2</sub></u>. Sb 1, 16-19. (RZhRadiot, 1/82, 1Ye347)
- 435. Yemaleyev, O.N., and V.P. Lukin (0). Experiment on adaptive control of an optical beam. Sb 16, 88-90. (RZhRadiot, 2/82. 2Ye439)

## 2. In Liquids

- 436. Demidov, A.A. (2). Remote laser probing of the pigments of marine phytoplankton. Moskovskiy GU. Dissertation, 1981, 21 p.

  (KLDVAD, 2/82, 2040)
- Dynamics of an elementary band due to the focusing of laser

  radiation in a liquid. Sb 7, 62-65.
- 438. Ivanov, Yu.S., and Z.M. Kaveyeva (214). Coherent interaction of light pulses with liquid media. Tr 7, 59-74. (RZhR, 1/82, 1D1562)
- 439. Ivanov, Yu.S., and Z.M. Kaveyeva (214). Laser pulses in media with a high concentration of active particles. Tr 7, 75-81. (RZhF, 1/82, 1D1561)
- 440. Pavlov, P.A. (0). Shock regime for boiling a liquid with a free surface. Sb 19, 57-64. (RZhF, 1/82, 11339)
- 441. Teslenko, V.S. (76). Effect of stimulated scattering on the spatial structure of optical breakdown in liquids. ZhTF P, no. 2, 1982, 77-81.
- 442. Yegerev, S.V., and A.Ye. Pashin (0). Laser spark as a source of sound waves in a liquid. Sb 7, 66-68.

### 3. Theory

- 443. Abrashin, V.N., A.A. Afanas'yev, V.V. Drits, and A.I. Urbanovich (3).

  Photoinduced diffraction of radiation in media with cubic nonlinearity.

  Institut fiziki AN BSSR. Preprint, no. 244, 1981, 27 p. (RZhF, 1/82, 1D1566)
- 444. Agrovskiy, B.S. (0). Experimental study on intensity fluctuations of narrow laser beams propagating in a turbulent medium. Sb 16, 6-8.

  (RZhRadiot, 2/82, 2Ye427)
- 445. Ayrapetov, Yu.S., N.G. Gachechiladze, S.I. Grigor'yev, Ye.M. Dianov, M.G. Zguladze, S.A. Kandelaki, A.N. Mestvirishvili, V.R. Sagaradze, and V.S. Chagulov (39). Polarization properties of polymer gradedindex rods. KE, no. 2, 1982, 389-390.
- 446. Bufetov, I.A., A.M. Prokhorov, V.B. Fedorov, and V.K. Fomin (1).

  Hydrodynamic relaxation of a cloud of hot gas after laser breakdown

  in air. Fizicheskiy institut AN SSSR. Preprint, no. 181, 1981, 8 p.

  (RZhF, 2/82, 2148)
- 447. Kopilevich, Yu.I., and V.V. Frolov (0). Using ray tracing to describe the field fluctuation of an optical beam scattered by a randomly inhomogeneous medium layer. ZhTF, no. 2, 1982, 229-237.
- 448. Kuz'min, V.S., and A.P. Sayko (0). Electromagnetic induction and echo signals in uniformly broadened quantum systems. DAN B, no. 9, 1981, 797-800. (RZhF, 1/82, 1D1560)

- 449. Lukin, V.P. (0). Correction of random inclinations in optical beams.

  Sb 16, 79-82. (RZhRadiot, 2/82, 2Ye433)
- 450. Rozanov, N.N., V.Ye. Semenov, and G.V. Khodova (0). <u>Transverse field</u>
  structure in nonlinear bistable interferometers. Part 1. Reversing
  waves and stationary profiles. KE, no. 2, 1982, 354-360.
- 451. Rozanov, N.N., V.Ye. Semenov, and G.V. Khodova (0). <u>Transverse field</u>

  structure in nonlinear bistable interferometers. Part 2. Transient

  effects. KE, no. 2, 1982, 361-363.
- 452. Salenkov, V.Yu. (36). "Inverse" modeling by the Monte-Carlo method in various problems of radiation heat exchange. Sb 2, 141-145.
- 453. Tartakovskiy, V.A. (0). <u>Interferometry of a parabolic wave field</u>.

  Sb 16, 32-34. (RZhRadiot, 2/82, 2Ye443)
- 454. Tatarskiy, V.I. (0). Theory of adaptive optical systems. Sb 12, 336-353. (RZhF, 2/82, 2D1065)
- 455. Zverev, V.A., T.P. Kosoburd, and F.A. Markus (94). Optical method for isolating signals from a periodic background of interference.

  IVUZ Radiofiz, no. 2, 1982, 199-203.
- D. COMPUTER TECHNOLOGY
  - 456. Arutyunov, V.A., N.A. Yesepkina, B.A. Kotov, Yu.A. Kotov, A.P.

    Lavrov, and I.I. Sayenko (29). <u>Using charge-coupled devices in optical information processing systems</u>. PTE, no. 1, 1982, 98-102.

- 457. Bazhenov, M.Yu., Yu.M. Barabash, A.A. Kostyuk, N.G. Kuvshinskiy, S.I. Kudinova, N.G. Nakhodkin, V.A. Pavlov, N.I. Sokolov, and Ye.Ye. Sirotkina (51). Carrier for recording optical holograms in real time. Author's certificate USSR, no. 840786, 25 June 1981. (RZhRadiot, 2/82, 2Ye611)
- 458. Bekker, Ya.M., I.K. Meshkovskiy, N.D. Frolov, and Ye.G. Yakushenko

  (0). Method of preparing a memory array. Othr izobr, no. 1, 1982,

  896689.
- 459. Stepanov, S.I., and V.D. Gural'nik (4). Correlation analysis of two-dimensional images based on three-dimensional Van der Lugt filters. ZhTF P, no. 2, 1982, 114-118.
- 460. Vagin, A.I., and V.M. Vatutin (243). Optical channels for transmitting information in automatic control systems for accelerators. Tr 8, 87-96. (RZhF, 2/82, 2A221)
- 461. Vaneyev, G.G., and G.Ye. Yastrebov (24). Identifying the informative signs of a recognized object by means of a holographic processor.

  Tr 9, 43-47. (RZhRadiot, 1/82, 1Ye461)
- 462. Vatutin, V.M., I.N. Zagrubskiy, and M.D. Kontorov (243). Apparatus for transmitting digital information over optical channels in automatic control systems for accelerators. Tr 8, 114-122.

  (RZhF, 2/82, 2A220)

- 463. Vodovatov, I.A., and S.A. Rogov (29). Effect of random errors on the characteristics of acoustooptic correlators operating in real time. IVUZ Radiofiz, no. 2, 1982, 204-210.
- 46%. Yusim, G.V., and A.I. Taganov (128). Software for a laser raster coordinatograph. Deposit at VINITI, no. 1671-81, 20 Oct 1981, 9 p. (DR. 32, 183)

#### E. HOLOGRAPHY

- digital images from multifrequency signal sources by phase
  holograms. Sb 20, 22-31. (RZhRadiot, 2/82, 2Ye597)
- 466. Bazhenov, V.Yu., N.M. Burykin, M.V. Vasnetsov, S.V. Volkov, M.S. Soskin, and V.B. Taranenko (5). Study on the formation processes for volume phase holograms in layers of bichromated gelatin.

  UFZh, no. 1, 1982, 18-22.
- 467. Belonuchkin, V.Ye., G.R. Lokshin, and S.M. Kozel (118). Device for producing holograms. Othr izobr, no. 7, 1982, 814099.
- 468. Bobrov, S.T., and Yu.G. Turkevich (0). Monochromatic objective.

  Otkr izobr, no. 10, 1982, 913318.
- Osiko, N.V. Tkachenko, V.V. Voronov, and D.Kh. Nurligareyev (0).

  Barium-strontium niobate crystals for ptical information recording.

  PSS, v. A65, no. 2, 1981, 513-522. (RZhF, 1/82, 1D1121)

- 470. Grinev, A.Yu., and V.S. Temchenko (0). Formation of spatial characteristics for directing nonplanar axially symmetric antenna arrays by coherent optical methods using volume holograms.

  IVUZ Radioelektr, no. 2, 1982, 29-34.
- 471. Gurragcha, Zh. (Mongolian), S.B. Gurevich, V.A. Dzhanibekov, B.Ye. Kashonov, V.V. Kovalenok, V.B. Konstantinov, M. Kordero, S. Mesa (Cubans), A.V. Militsin, R. Oms, V. Rivera, M. Rivero (Cubans), B.F. Ryadinskiy, V.P. Savinykh, V.K. Samsonov, M.S. Cheberak, D.F. Chernykh, and L.I. Chuykina (0). Exchange of holographic information between the "Salyut-6" space station and flight control center.
  TKiT, no. 2, 1982, 5-11.
- 472. Karnaukhov, V.N., N.S. Merzlyakov, and Yu.N. Ovechkis (201).

  Synthesis of hybrid optical-digital stereo holograms. ZhTF,
  no. 2, 1982, 396-399.
- 473. Liebmann, G. (NS). Measuring the bleaching efficiency of ORWO LP-2

  Mikrat plates. JS, no. 2, 1981, 121-127. (RZhF, 1/82, 1D1187)
- 474. Mirovitskiy, D.I., and V.I. Shanin (161). Method for recording information from three-dimensional objects. Other izobr, no. 9, 1982, 417067.
- 475. Ochin, Ye.F. (30). Synthesis of amplitude spatial-frequency filters for coherent optical processors. IVUZ Priboro, no. 2, 1982, 30-34.
- 476. Panakhov, M.M. (0). Study on the diffraction of light by a volume phase grating. Sh 21, 104-106. (RZhF, 2/82, 2D395)

- 477. Romanov, Yu.F. (30). Reconstruction of transparency images and matched filtering, using volumetric phase Fourier holograms.

  IVUZ Priboro, no. 1, 1982, 70-75.
- 478. Totskiy, A.V. (0). Forming a holographic image from a wideband signal source. Sb 20, 32-40. (RZhRadiot, 2/82, 2Ye598)
- 479. Turukhano, B.G., and N. Turukhano (252). Device for recording holograms of objects in opposed beams. Other izobr, no. 9, 1982, 911450.
- F. LASER-INDUCED CHEMICAL REACTIONS
  - 480. Akinfiyev, N.N. (67). <u>Kinetics of CO<sub>2</sub>-laser-induced dissociation of tetrafluorohydrazine</u>. Institut khimicheskoy fiziki AN SSSR.

    Dissertation, 1981, 23 p. (KLDVAD, 1/82, 427)
  - 481. Bagratashvili, V.N., V.N. Burimov, L.Ye. Deyev, V.S. Letokhov, A.P. Sviridov, and V.S. Shaydurov (614). Producing (CF<sub>3</sub>)<sub>3</sub>C radicals by multiphoton IR dissociation of (CF<sub>3</sub>)<sub>3</sub>CBr. KE, no. 2, 1982, 423-425.
  - 482. Bagratashvili, V.N., V.N. Burimov, L.Ye. Deyev, A.V. Zabolotnykh,

    V.S. Letokhov, G.I. Nazarenko, A.P. Sviridov, and V.S. Shaydurov

    (614). Multiphoton IR dissociation of CF<sub>3</sub>Br and CF<sub>3</sub>Cl molecules at high temperatures. KE, no. 2, 1982, 425-427.
  - 483. Beterov, I.M., M.A. Vaksman, Ya.G. Epel'baum, and N.I. Yurshina (159).

    Permanent saturation photodissociation of bromine molecules in an argon laser radiation field. KE, no. 1, 1982, 66-75.

- 484. Bureyko, S.F., and I.L. Danilov (32). Study on luminescence of gaseous freons and their mixtures in a CO<sub>2</sub> laser field. Sb 22, 207-214. (RZhF, 1/82, 1D667)
- 485. Delone, N.B., and V.P. Kraynov (0). Nonlinear ionization of atoms.

  Sb 23, 63-74.
- 486. Galagan, B.I., P.D. Dakhnov, K.M. Dyumayev, I.V. Komlev, G.A.

  Matyushin, and M.I. Tribel'skiy (0). Mechanism of forming free

  carbon in organic liquids under the action of optical radiation of

  moderate intensity. KE, no. 2, 1982, 291-298.
- 487. Grigorov, L.N., and V.Ya. Munblit (196). Laser flash desorption and its use in studies on heterogeneous catalysis. Part 7. The mechanism of final stages in the conversion of acetaldehyde using a cupric oxide catalyst and the nature of coupled neutral and charged interstitial compounds. Kinetika i kataliz, no. 1, 1982, 96-102.
- 488. Gurinovich, G.P. (3). Oxygen, its luminescence and effect on the luminescence from organic molecules. IAN Fiz, no. 2, 1982, 362-366.
- 489. Letokhov, V.S. (1). Method for photodissociation of a gas by laser radiation. Othr izobr, no. 4, 1982, 784680.
- 490. Lysenko, V.S., A.N. Nazarov, and M.M. Lokshin (6). Active doping of thin subsurface layers in silicon oxides with boron ions, using laser radiation. Mikroelektronika, no. 1, 1982, 74-77.

- 491. Matyuk, V.M., V.K. Potapov, and A.L. Prokhoda (122). Kinetics of stepped processes in photoexcitation and photoionization of free molecules of aromatic aldehydes and ketones. KhVE, no. 1, 1982, 3-9.
- 492. NaSiyev, Sh.Sh. (1). Study on the parameters of a CF<sub>4</sub> laser and its use for dissociation of UF<sub>6</sub> molecules. Fizicheskiy institut AN SSSR. Dissertation, 1981, 13 p. (KLDVAD, 1/82, 501)
- 493. Pankratov, A.V., and G.V. Shmerling (0). Reaction mechanism in a

  BCl<sub>3</sub>-SiF<sub>4</sub>-H<sub>2</sub> system resulting from the effect of CO<sub>2</sub> laser radiation.

  KhVE, no. 1, 1982, 69-72.
- 494. Sazonov, V.N., and G.V. Shmerling (1). Effect of inert gases on laser-initiated chemical reactions. KE, no. 2, 1982, 370-372.
- 495. Solov'yev, K.N., M.P. Tsvirko, V.Ye. Pyatosin, and T.F. Kachura (3,334). Study on the mechanism of photophysical processes in complex rare-earth elements, using luminescence and kinetic absorption spectroscopy. IAN Fiz., no. 2, 1982, 242-248.
- 496. Vasil'yev, G.K., Ye.F. Makarov, Yu.A. Chernyshev, and V.G. Yakushev

  (0). Mechanism of critical behavior of chemically reacting systems

  under the effect of laser radiation. FGiV, no. 1, 1982, 61-66.
- 497. Zuyev, V.S., and Ye.P. Orlov (1). Intensity of ultrasound excited by stimulated scattering of light from photo-controlled chemical reactions. Fizicheskiy institut AN SSSR. Preprint, no. 158, 1981, 15 p. (RZhF, 2/82, 2D1619)

## G. MEASUREMENT OF LASER PARAMETERS

- 498. Abashev, Yu.G., G.A. Yelkin, and V.I. Purtov (0). Improving the accuracy and reproducibility of the MTs-1 cesium frequency standard.

  Sb 4, 62-63. (RZhRadiot, 2/82, 2Ye463)
- 499. Akhmediyev, N.N., and V.I. Vladimirov (7). Use of secondary wave effects in measuring apparatus. OMP, no. 2, 1982, 1-3.
- 500. Basov, N.G., E.M. Belenov, M.A. Gubin, V.V. Nikitin, and Ye.D.

  Protsenko (0). Status and prospects for developing optical frequency

  standards. Sb 4, 42. (RZhRadiot, 2/82, 2Ye466)
- 501. Bodnar, R.V., and A.F. Denisov (0). Device for studying one-time
  and seldom repeating signals. Author's certificate USSR,
  no. 828125, 7 May 1981. (RZhRadiot, 1/82, 1Ye319)
- 502. Borovitskiy, S.I., Kh.A. Aynitdinov, V.M. Belov, N.B. Voronova, A.D. Vorob'yev, V.D. Gelikonova, and A.V. Komkov (0). <u>Industrial sample</u> of an operating voltage etalon based on the Josephson effect.

  Sb 4, 186-188. (RZhRadiot, 2/82, 2Ye464)
- 503. Demchenko, V.Ye., and L.K. Zolotkov (0). <u>Possibility of improving</u>
  the accuracy of a digital frequency multiplier. Sb 4, 73-74.

  (RZhRadiot, 2/82, 2Ye457)
- Demchuk, M.I., V.P. Kuznersov, K.P. Utochkin, V.F. Kaptur, and V.V.

  Pal'skov (334). Meter for measuring the energy of laser pulses.

  PTE, no. 1, 1982, 256.

- 505. Didyk, L.A. (0). Study on an automated liquid energy meter of laser pulses. Sb 4, 266-267. (RZhRadiot, 2/82, 2Ye452)
- 506. Domnin, Yu.S., N.B. Koshelyayevskiy, V.M. Tatarenkov, and N.O. Shumyatskiy (0). New measurement of the frequency of an He-Ne/CH<sub>4</sub> laser. Sb 4, 49-51. (RZhRadiot, 2/82, 2Ye450)
- 507. Domnin, Yu.S., N.B. Koshelyayevskiy, Yu.M. Malyshev, Yu.G.

  Rastorguyev, V.M. Tatarenkov, and A.N. Titov (0). Measuring the difference frequency between He-Ne lasers stabilized by the F<sub>2</sub><sup>2</sup> and E components of the v<sub>3</sub>P(7) transition in methane. Sb 4, 52-54.

  (RZhRadiot, 2/82, 2Ye448)
- 508. Drobinin, S.Yu., A.I. Sokolovskaya, and N.V. Okladnikov (1).

  Contrast reversal during photographic recording of laser radiation.

  KE, no. 1, 1982, 176-178.
- 509. Gorlanov, A.V., N.I. Grishmanova, N.A. Sventsitskaya, and V.D.

  Solov'yev (0). Angular characteristics of the radiation from a

  neodymium laser with wavefront reversal during parametric three-wave
  interaction. KE, no. 2, 1982, 415-417.
- of short light pulses. Sb 4, 152-153. (RZhRadiot, 2/82, 2Ye608)
- 511. Kirsanov, A.V., A.I. Popov, and A.V. Sadchikhin (0). Study on the dependence of the output power of an He-Xe laser at 3.3673 µm on the parameters of the active medium. ZhPS, v. 36, no. 1, 1982, 148-150.

- 512. Kolesnikov, V.M. (87). Micropyrometer for direct measurement of the temperature of the surface of a semiconductor laser. Deposit at VINITI, no. 3445-81, 10 July 1981, 16 p. (RZhF, 1/82, 1A169)
- 513. Koshelyayevskiy, N.B., L.N. Kopylov, S.N. Ovchinnikov, and V.M.

  Tatarenkov (0). CO<sub>2</sub>/0sO<sub>4</sub> frequency standard with an external

  intracavity absorption cell. Sb 4, 47-49. (RZhRadiot, 2/82, 2Ye461)
- 514. Kozlov, A.V., and Ye.G. Chulyayeva (0). Means for measuring the wavelength and instability of a laser frequency. Sb 6, 63.

  (RZhRadiot, 2/82, 2Ye451)
- 515. Luk'yanenko, S.F., and M.M. Makogon (0). <u>Intracavity laser gas</u>
  analyzer. Sb 1, 73-74. (RZhRadiot, 2/82, 2Ye475)
- 516. Medvedev, Yu.N., A.I. Shcherbakov, and A.N. Sokolov (0). Exploitation characteristics of an etalon frequency and time complex based on hydrogen frequency standards. Sb 4, 70. (RZhRadiot, 2/82, 2Ye460)
- 517. Papp, F.F., and N.I. Romanyuk (136). <u>Using the AI-128-2 multichannel</u> pulse analyzer in studies on electron-atom collisions. Sb 2, 112-115.
- 518. Polyakova, L.I., V.Yu. Runov, V.L. Simanskiy, Yu.V. Timofeyev, and

  A.A. Ul'yanov (0). Some results from a study on a metrological cesium

  frequency standard. Sb 4, 90. (RZhRadiot, 2/82, 2Ye465)
- 519. Rondin, Yu.P., Yu.N. Medvedev, and N.N. Titov (0). <u>Using auto-regressions in predicting the frequencies of hydrogen standards</u>.

  Sb 4, 85. (RZhRadiot, 2/82, 2Ye458)

- 520. Sakharov, B.A., V.A. Logachev, V.S. Gorev, A.A. Ul'yanov, and S.A. Kozlov (0). Frequency variations of the output signal of a hydrogen standard due to the instrument frequency coordination of the quartz oscillator to the frequency of the hydrogen standard. Sb 4, 67-68.

  (RZhRadiot, 2/82, 2Ye462)
- 521. Sinani, A.B., and I.I. Timoshenko (0). Method for observing

  Brillouin scattering of low-power multimode laser radiation in
  glassy polymers. ZhPS, v. 36, no. 2, 1982, 212-215.
- 522. Wieczorek, L.W., J. Mueller, and G. Fritz (NS). Radiation energy and power meter. Patent GDR, no. 147001, 11 March 1981. (RZhRadiot, 1/82, 1Ye360)
- Sheronov, and B.P. Fateyev (0). Some results and analysis of the possibility of remote enhancement of the frequency characteristics of a ruby quantum frequency standard. Sb 4, 64-65. (RZhRadiot, 2/82, 2Ye459)
- 524. Zagorskiy, Ya.T. (2). <u>Intensity stabilizer for calibrating a laser</u> radiation converter. Othr izobr, no. 1, 1982, 797320.
- H. LASER MEASUREMENT APPLICATIONS
  - 1. Direct Measurement by Laser
  - 525. Abramson, N. (NS). Interference band processing in holographic interferometry. Kep-es hangtechnika, no. 4, 1981, 127-128.

    (RZhRadiot, 1/82, 1Ye462)

- 526. Achasov, O.V., R.I. Soloukhin, and N.A. Fomin (180). <u>Diagnostics of</u>

  gas flows by means of resonance absorption. Institut teplo- i

  massoobmena AN BSSR. Preprint, no. 8, 1981, 48 p. (RZhF, 1/82, 1D727)
- 527. Asnis, L.N., and A.A. Vetrov (7). <u>Interferometer based on a CO</u>2

  laser. OMP, no. 2, 1982, 28-29.
- 528. Baluyeva, G.A. (0). A laser beam over the pavement. Khimiya i zhizn', no. 1, 1982, 36.
- 529. Barsukov, S.I., O.P. Voznenko, F.Kh. Babiker, S.A. Podol'skiy, and V.V. Cherniyenko (380). Method of diagnosing an internal combustion engine. Otkr izobr, no. 5, 1982, 903732.
- 530. Bannikov, V.S., S.M. Bezruchko, S.V. Kuz'min, S.A. Saunin, and Yu.A. Sprizhitskiy (0). Laser method for monitoring microparticles in liquid industrial media. Sb 6, 60-61. (RZhRadiot, 2/82, 2Ye536)
- 531. Bazarov, Ye.N., A.T. Polukhin, Ye.I. Sverchkov, and G.I. Telegin (15).

  Amplitude-phase noise in a fiber optic ring interferometer caused by

  distortion in optical waves at acoustic emission centers in singlemode fiber lightguides. ZhTF, no. 1, 1982, 165-166.
- 532. Bekshayev, A.Ya., V.M. Grimblatov, O.N. Okunishnikov, and R.A.

  Petrenko (0). Effect of errors in the orientation of optical rangefinding systems, on the accuracy of distance measurement. Sb 1,

  176-179. (RZhRadiot, 2/82, 2Ye487)

- 533. Belevitnev, V.R., Yu.F. Zastrogin, and M.I. Perets (166,355).

  Device for interferometric measuring of high surface displacement rates. Othr izobr, no. 8, 1982, 909637.
- 534. Belikov, A.G., V.P. Goncharenko, D.K. Goncharenko, N.T. Derepovakiy, and I.K. Nikol'skiy (0). Measurements of radial density distributions in a pulsed plasma accelerator interelectrode gap by CO<sub>2</sub> laser interferometry. Sb 11, D7. (RZhF, 2/82, 2G349)
- 535. Birman, A.Ya., and V.N. Logozinskiy (0). Nonlinear phase decoupling in a fiber ring interferometer. KE, no. 2, 1982, 410-413.
- 536. Bogar, I. (NS). Measuring the displacement of diffuse surface

  wavefronts of an object by holographic interferometry. FM, no. 8,

  1981, 228,229-233,255,256. (RZhF, 2/82, 2D1264)
- 537. Bogomolov, N.F., S.N. Khotyaintsev, and L.K. Yarovoy (0).

  <u>Two-channel fiber-optic laser Doppler velocimeter</u>. Deposit at

  VINITI, no. 5080-81, 3 Nov 1981, 14 p. (RZhRadiot, 2/82, 2Ye502)
- 538. Borukhman, A.N., N.K. Varchuk, I.S. Oleynik, S.Yu. Oleynikov, and
  A.N. Strebulayev (0). Possibility of using long optical fibers for
  evaluating the accuracy characteristics of pulsed laser rangefinders.

  Sb 4, 108-109. (RZhRadiot, 2/82, 2Ye376)
- 539. Callsen, J., and W. Deutsch (NS). Method and apparatus for optical monitoring of hybrid circuits. Feingersetetechnik, no. 8, 1981, 339-340. (RZhRadiot, 1/82, 1Ye403)

- 540. Chashin, D.V. (0). Analysis of the accuracy factors for nondestructive monitoring of the electrophysical parameters of semiconductor films by an integrated optics method. Sb 9, 23-28. (RZhF, 1/82, 1D1175)
- 541. Chulyukov, V.A. (0). Using a holographic method to measure the velocity of aero- and hydrodynamic flows. Sb 6, 61-62.

  (RZhRadiot, 2/82, 2Ye601)
- 542. Dub, I.S., and G.Ye. Ryazantsev (0). Device for pre-setting the vertical control in centering operations. Other izobr, no. 3, 1982, 900112.
- 543. Feduleyev, B.V., V.P. Ryabukho, and V.B. Rabkin (0). Measuring the thermal coefficient of line broadening by holographic interferometry.

  ZhTF, no. 2, 1982, 324-329.
- 544. Gafanovich, G.Ya., T.I. Kurova, and A.S. Litvinenko (0). Holographic interferometer for quality control of substrates used in the production of microelectronics instruments. Sb 6, 58. (RZhRadiot, 2/82, 2Ye595)
- 545. Ganapol'skiy, Ye.M., A.P. Korolyuk, and V.V. Tarakanov (15).

  Measuring small-scale attenuation of hypersound in crystals.

  PTE, no. 1, 1982, 202-205.
- 546. Garkusha, I.P., Yu.V. Kravchenko, and A.N. Kuznetsov (0). <u>Some</u>

  feasibilities for probability approaches to studying inhomogeneous

  objects. EOM, no. 1, 1982, 57-59.

- 547. Gol'dort, V.G., V.F. Zakhar'yash, V.M. Klement'yev, M.V. Nikitin,

  B.A. Timchenko, and V.P. Chebotayev (159). Producing an optical

  time scale. ZhTF P, no. 3, 1982, 157-161.
- 548. Golovanov, V.A., I.I. Ponomarev, and G.N. Chernyshev (0).

  Experimental and theoretical study on vibrations of plates in contact with a liquid. Sb 24, 5-13.
- 549. Gonchukov, S.A., Ye.P. Yemets, and R.D. Kasumova (118). Two-mode

  gas laser as a highly sensitive measuring instrument of artificial

  anisotropy. Deposit at VINITI, no. 4847-81, 19 Oct 1981, 12 p.

  (RZhF, 1/82, 1D1627)
- 550. Gordeyev, S.V., B.G. Turukhano, V.P. Gorelik, and N. Turukhano (252).

  Comparative method for studying an interference field by a displacement interferometer. Leningradskiy institut yadernoy fiziki.

  Preprint, no. 684, 1981, 20 p. (RZhF, 1/82, 1D1032)
- for determining the adhesion of thin films in the production of integrated microcircuits. Sb 6, 59-60. (RZhRadiot, 2/82, 2Ye605)
- Solution Products. PTE, no. 1, 1982, 76-78.
- 553. Gurevich, M.Ye., and A.Ye. Pogorelov (0). <u>Use of laser technology for thermophysical studies</u>. Sb 25, 3-23. (RZhF, 1/82, 1D1628)

- 554. Khotyaintsev, S.N., N.F. Bogomolov, and L.K. Yarovoy (0). Laser

  Doppler velocimeter with fiber-optic channels. IVUZ Radioelektr,
  no. 1, 1982, 78-80.
- Sarcomere lengths in contracted muscle using a laser diffraction method. Biofizika, no. 1, 1982, 111-113.
- 556. Kolobrodov, V.G., and G.S. Tymchik (7). Study on the geometric parameters of spatially quasiperiodic structures, using a coherent optical spectral analyzer. OMP, no. 2, 1982, 9-11.
- 557. Komrakov, B.M., and B.A. Shapochkin (24). <u>Multiobject laser</u>
  interferometry for monitoring aspherical surfaces. IVUZ Priboro,
  no. 2, 1982, 67-71.
- Tsarfin (23). Requirements for the parameters of a holographic system for measuring the dispersity and bulk concentration of moving particles. Institut atomnoy energii. Preprint, no. 342/14, 1981, 12 p. (RZhF, 1/82, 1D1198)
- 559. Koryabin, A.V., and V.I. Shmal'gauzen (0). Optical method for recording acoustic vibrations of moving surfaces. Sb 7, 79-81.
- 560. Kosov, V.I., V.A. Parzyan, M.S. Tunin, and M.I. Tunina (0).

  Experimental device for studying integrated Rayleigh scattering in

  liquid media. Deposit at VINITI, no. 4771-81, 13 Oct 1981, 10 p.

  (RZhF, 1/82, 1D1047)

- 561. Kravarik, J., V. Kravarikova, A. Seifert, and J. Tobias (NS).

  Diagnostics of a pulsed discharge plasma by a Michelson interferometer

  with a ruby laser. CCF, v. A31, no. 4, 1981, 360-362. (RZhF, 1/82, 1D1643)
- 562. Kuznetsov, A.A. (141). Research and development of low-frequency amplifiers for laser photometry information-measuring systems using transistors in the microwave range. VNII optiko-fizicheskikh izmereniy. Dissertation, 1981, 23 p. (KLDVAD, 2/82, 2645)
- 563. Ledneva, G.P., and Yu.I. Chekalinskaya (3). Ring laser. Author's certificate USSR, no. 671659, 10 July 1981. (RZhRadiot, 2/82, 2Yel23)
- 564. Levin, A.D. (141). <u>Development and application of laser probing</u>

  methods to study shock and detonation waves. VNII optiko-fizicheskikh
  izmereniy. Dissertation, 1981, 25 p. (KLDVAD, 1/82, 487)
- 565. Lukin, V.A., B.A. Nechayev, A.V. Peshkov, and E.G. Furman (336).

  Study on radial distribution of electron concentration in a rotating plasma, using an interferometer. IVUZ Fiz, no. 1, 1982, 72-75.
- 566. Lysenko, O.G. (0). Holographic study on single- and two-phase media.

  Sb 26, 74-90. (RZhF, 2/82, 2D1266)
- 567. Makhviladze, T.M., and M.Ye. Sarychev (1). Measuring the rate

  constant for chemical reactions from excited states using light echo.

  ZhTF P, no. 2, 1982, 119-122.
- 568. Malakhovskiy, I.V. (0). Using a holographic photorecording method to study the structure of cavities. Sb 7, 88-92.

- 569. Markov, N.G., and V.N. Burlakov (0). Methods and results of holographic processing of geophysical information. Deposit at VINITI, no. 5304-81, 19 Nov 1981, 32 p. (RZhF, 2/82, 2D1167)
- 570. Milenin, V.V., V.Ye. Primachenko, N.A. Rastrenenko, O.V. Snitko, and N.N. Torchun (6). Structural transformations on a real semiconductor surface during the adsorption of metal ions with negative electrochemical potentials. NM, no. 2, 1982, 192-196.
- 571. Milewski, M. (NS). Trends in the development of mining geodesy.

  Zeszyty naukowe Akademii gorniczohutniczej, no. 828, 1981, 61-69.

  (RZhGeod, 2/82, 2.52.2)
- 572. Mirovitskiy, D.I., G.A. Samsonov, and V.I. Shanin (161). <u>Device for simultaneous measurement of size and distance</u>. Other izobr, no. 8, 1982, 434797.
- 573. Mirovitskiy, D.I., and G.A. Sobolev (161). Method for measuring the parameters of motion for fast-moving objects using radio technology.

  Otkr izobr, no. 9, 1982, 323754.
- 574. Morgunova, Ye.V., and V.N. Sutorshin (19). Signal filtering in optical Doppler anemometers. Tr 10, 76-83.
- 575. Mueller, H.R., and U. Roepke (NS). Preform index profiling with high spatial resolution. PSS, v. A66, no. 2, 1981, K161-K164. (RZhF, 2/82, 2D433)

- 576. Mus'yakov, M.P., N.V. Uzhov, V.Ye. Yastrebov, A.A. Kuznetsov, and V.B. Fedoseyev (24). Method and device for studying the vibration of objects with diffuse-reflecting surfaces. Othr izobr, no. 9, 1982, 911172.
- 577. Nicolau-Rebigan, S. (NS). <u>Various experimental laser interferometers</u>

  for determining the dynamic and dosimetric characteristics of

  irradiated solids. SCF, no. 7, 1981, 723-741. (RZhF, 2/82, 2D1092)
- 578. Patrushev, G.Ya., A.I. Petrov, V.V. Pokasov, and A.P. Rostov (78).

  Method for measuring the velocity of a turbulent flow. ZhTF P,

  no. 2, 1982, 94-97.
- 579. Petrash, G.G. (0). <u>Brightness amplifiers for optical devices</u>.

  AN SSSR. Vestnik, no. 2, 1982, 66-75.
- 580. Plavnik, Yu.K., M.M. Kaydanovskiy, L.S. Kantsler, and R.Ye. Pyatetskiy

  (0). <u>Multichannel laser image generator</u>. Othr izobr, no. 8, 1982,

  11720.
- 581. Presnov, V.A., V.A. Chershanskiy, O.V. D'yachenko, O.A. Kulinich, and O.V. Tuda. ov (0). Noise rejection in an information channel of laser navigation systems. Sb 1, 187-189. (RZhRadiot, 1/82, 1Ye446)
- 582. Rondarev, V.S. (30). Study on laser microscopy methods and their use for measuring impurity inhomogeneities in semiconductor crystals.

  Leningradskiy institut tochnoy mekhaniki i optiki. Dissertation,
  1980, 18 p. (KLDVAD, 1/82, 929)

- 583. Ruske, E. (NS). Optical instrument for monitoring surfaces.

  Patent GDR, no. 147573, 8 April 1981. (RZhRadiot, 1/82, 1Ye388)
- 584. Sardyko, V.I. (3). <u>Ring lase</u>r. Otkr 1zobr, no. 8, 1982, 496878.
- 585. Shchelev, M.Ya. (0). 14th International Congress on High-Speed

  Photography and Photonics, Moscow, October 1980. AN SSSR. Vestnik,
  no. 9, 1981, 94-100.
- 586. Shteynshleyger, V.B., A.N. Yerkin, P.S. Lifanov, G.S. Misezhnikov, and A.V. Yanovich (0). Methods for processing synthetic aperture radar signals in solving national economic problems. RiE, no. 2, 1982, 193-213.
- 587. Sinchenko, V.G. (0). Information display through a turbid medium by holographic and photographic recording methods. Sb 15, 247-250.

  (RZhRadiot, 1/82, 1/8467)
- 588. Smirnov, V.I. (19). Spectrum analysis of the Doppler signal in non-Poisson's castics of diffuser operation. Tr 10, 60-68.
- 589. Smirnov, V.I., and A.S. Timofeyev (19). Analysis of Gaussian beam transformation in an optical scanning system. Tr 10, 114-120.
- 590. Sokolov, V.K., and A.F. Malyy (4). <u>Device for image processing.</u>

  Author's certificate USSR, no. 858028, 23 Aug 1981. (RZhRadiot, 2/82, 2Ye596)
- 591. Spevchuk, V.V., and L.M. Kuchikyan (435). Determining the caking temperature of glass. FiKhS, no. 1, 1982, 108-110.

- 592. Stanciu, G.A., I.M. Popescu, and C.M. Stoichita (NS). <u>Determining</u>
  the lifetime of minority carriers by a digital laser scanning system.

  BIPG, no. 1, 1981, 19-22. (RZhF, 2/82, 2D1688)
- 593. Stefanovich, S.Yu., R.Ch. Bichurin, V.I. Popolitov, and Yu.N. Venevtsev (122). Observing phase transitions in Ln<sub>3</sub>Sb<sub>5</sub>O<sub>12</sub> (Ln=La,Pr,TbYb) rare-earth antimonite crystals. FTT, no. 2, 1982, 616-618.
- 594. Ul'man, P., Kh. Ul'man, Yu.A. Shcherbakov, and K. Zeliger (52).

  Stereoscopic recording of charged particle tracks in a streak chamber

  by means of laser technology. Ob"yedinennyye institut yadernykh

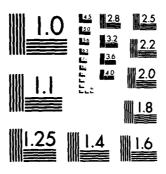
  issledovaniy. Preprint, no. 13-81-321, 1981, 11 p. (RZhF, 2/82,

  2V645)
- 595. Ul'man, P., Kh. Ul'man, Yu.A. Shcherbakov, and K. Zeliger (52).

  Effect of methane on the quality of tracks in laser recording of
  electrons in a helium streak chamber. Ob"yedinennyye institut
  yadernykh issledovaniy. Preprint, no. 13-18-323, 1981, 10 p.

  (RZhF, 2/82, 2V648)
- 596. Vanin, V.A. (7). <u>Interference method for measuring the space between</u>
  planar transparent surfaces, using a laser. OMP, no. 1, 1982, 18-20.
- 597. Vasilina, Z.S., A.I. Yakivchuk, and S.I. Yekhanina (0). Holographic study on mechanical stresses in thin films. Sb 6, 59. (RZhRadiot, 2/82, 2Ye604)

AD-A126 620	BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS NUMBER 57 JANUARY-FEBRUARY 1982(U) DEFENSE INTELLIGENCE AGENCY WASHINGTON DC DIRECTORATE FOR SCI. 02 MAR 83 DIA-DST-2700Z-003-83 F/G 5/2							) NL	2/2 ·			
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- 598. Vlad, V.I., M.V. Udrea, and D. Popa (NS). <u>UV pulsed interferometry</u>
  and holography in the nanosecond range using a nitrogen laser.

  RRP, no. 6, 1981, 565-568. (RZhF, 2/82, 2D1262)
- 599. Vlasov, N.G., S.G. Galkin, and E.G. Semenov (0). <u>Interference method</u>

  for measuring objects. Other izobr, no. 3, 1982, 784460.
- 600. Voyevodin, A.A., E.K. Alekseyev, V.Ye. Polyakov, L.I. Gromov, A.Ye. Bystryakov, and Yu.N. Zadorozhnyy (0). Holographic method for monitoring a layered structure. Author's certificate USSR, no. 855386, 25 Aug 1981. (RZhRadiot, 2/82, 2Ye607)
- 601. Vyshemirskiy, A.V. (0). Upper limit to the measurable range for mechanical vibration amplitudes of diffuse surfaces using interferometry. ZhTF, no. 1, 1982, 67-73.
- 602. Wolinski, W., and A. Kowalski (NS). Laser theodolite. Patent Poland, no. 108423, 31 Dec 1980. (RZhGeod, 2/82, 2.52.260)
- 603. Yakhkind, A.K., and A.A. Kozmanyan (7). Production of glass with a uniform refractive index using ion exchange. FiKhS, no. 1, 1982, 67-74.
- 604. Yenikov, R.Z., and D.Kh. Oliver (Bulgarians). Method for measuring the velocity of solid particles in a high-temperature gas flow.

  TVT, no. 1, 1982, 199-201.

- 605. Yevtikhiyev, N.N., V.F. Papulovskiy, A.B. Romanov, and L.V. Chashin

  (0). Measuring the electrophysical parameters of semiconductor

  epitaxial films by an integrated optics method. Sb 9, 3-8.

  (RZhF, 1/82, 1D1174)
- 606. Yudin, V.V., Ye.I. Rudik, A.V. Matokhin, G.P. Timakova, V.A. Gulenko, N.I. Chukhriy, and L.A. Yudina (256). Long-range order in the structure of amorphous films. FTT, no. 2, 1982, 443-448.
- 607. Zaslonko, I.S., and V.N. Smirnov (67). Monomolecular reactions in shock waves and energy exchange of highly excited molecules.

  Sb 27, 80-95.
- 608. Zscherpe, G. (NS). <u>Using lasers for trimming thin-layer elements</u>. Feingeraetetechnik, no. 8, 1981, 354-357. (RZhRadiot, 1/82, 1Ye404)

# 2. Laser-Excited Optical Effects

- 609. Abrayev, Ch., I.Ya. Dekhtyar, E.G. Madatova, and M.M. Nishchenko

  (283). Study on positron annihilation internally and on the surface

  of amorphous copper-zirconium alloys. UFZh, no. 1, 1982, 85-91.
- on nonequilibrium carriers in p-type Cd Hg Te crystals. IAN

  Energetika i transport, no. 1, 1982, 86-91.
- 611. Agre, M.Ya., and L.P. Rapoport (137). Scattering of electrons by an atom in a resonant laser radiation field. ZhETF, v. 82, no. 2, 1982, 378-385.

- on the photomagnetic effect in semiconductors with deep centers.

  IAN Uz, no. 1, 1982, 57-60.
- 613. Aytikeyeva, T.D., A.M. Gas'kov, M.A. Lazarenko, and A.I. Lebedev (2).

  Photoluminescence of Ga-doped PbTe. Deposit at VINITI, no. 4856-81,

  22 Oct 1981, 12 p. (RZhF, 1/82, 1D942)
- 614. Aytikeyeva, T.D., A.M. Gas'kov, A.N. Lebedev, and N.G. Lisina (2).

  Luminescence spectra of Pb 1-x Te(CD) samples obtained by diffusion annealing. Deposit at VINITI, no. 4857-81, 22 Oct 1981, 9 p.

  (RZhF, 1/82, 1D941)
- 615. Aytikeyeva, T.D., A.I. Lebedev, A.E. Yunovich, K. Herrmann, A.W. Jalyschko, and P. Schaefer (0). Spectra of photo- and electro
  luminescence of bismuth-doped Pb<sub>1-x</sub>Sn<sub>x</sub>Te. PSS, v. A67, no. 1,

  1981, 171-175. (RZhF, 2/82, 2Ye1674)
- 616. Baranov, B.V., and U. Zhumakulov (0). Impurity photoluminescence of GaN<Zn>, Al<sub>x</sub>Ga<sub>1-x</sub>N<Zn>. Deposit at VINITI, no. 5009-81,

  2 Nov 1981, 7 p. (RZhF, 2/82, 2D1008)
- 617. Bazhenov, N.L., B.L. Gel'mont, V.I. Ivanov-Omskiy, A.A. Mal'kova, V.K. Ogorodnikov, and T.Ts. Totiyeva (4). Recombination of nonequilibrium charge carriers in n-Cd lig 1-x Te (0.2<x<0.3).

  FTP, no. 1, 1982, 109-112.

- 618. Beregulin, Ye.V., S.D. Ganichev, I.D. Yaroshetskiy, and I.L.

  Yassiyevich (4). Energy relaxation mechanism under conditions of nonlinear optical absorption in p-Ge. FTP, no. 2, 1982, 286-290.
- 619. Bogdanov, V.L., and V.P. Klochkov (0). Study on the nature of

  luminescence from upper electron states. IAN Fiz, no. 2, 1982,

  367-372.
- 620. Bubis, Ye.L., and M.A. Novikov (426). Anisotropy of independent magnetooptic effects in crystals. ZhTF, no. 2, 1982, 399-400.
- 621. Bykovskiy, Yu.A., V.S. Kulikauskas, V.N. Nevolin, and I.D. Khabelashvili (16). Producing nonequilibrium alloys by monochromatic radiation. ZhTF, no. 1, 1982, 61-63.
- 622. Dabizha, T.A., A.A. Bogomolov, and V.M. Rudyak (0). Abrupt
  repolarization processes in ferroelectric single crystals caused by
  the action of focused laser radiation. IAN Fiz, no. 9, 1981,
  1635-1639. (RZhF, 1/82, 1Ye1968)
- 623. Dvorak, L., J. Perina, Z. Kupka, and A. Nezhoda (NS). Photocounting statistics of luminescence radiation. Sb 28, 17-24. (RZhF, 2/82, 2D410)
- of oxide films produced during thermal processing of highly ferrous glass. Ois, v. 52, no. 1, 1982, 122-125.

- 625. Ganapol'skiy, Ye.M., A.P. Korolyuk, and V.V. Tarakanov (15).

  Reducing the residual attenuation of longitudinal hypersound in dielectric crystals. ZhETF, v. 82, no. 1, 1982, 182-191.
- 626. Genkin, G.M., Yu.N. Nozdrin, I.D. Tokman, and V.N. Shastin (426).

  Direct observation of optical magnetization of CdCr<sub>2</sub>Se, ferromagnets

  with circularly polarized light. ZhETF P, v. 35, no. 4, 1982,

  162-164.
- 627. Girshberg, Ya.G., and N.N. Trunov (362). Phonon instability of a semiconductor in a strong e-m wave field. FTT, no. 1, 1982, 179-186.
- 628. Gladyshchuk, A.A., V.P. Gribkovskiy, and G.P. Yablonskiy (0).

  Streamer discharge in cadmium telluride single crystals. ZhPS,
  v. 36, no. 1, 1982, 97-100.
- 629. Gorchakov, A.P., Yu.A. Zarif'yants, and N.V. Znamenskiy (2). Surface recombination in lead-tin telluride films. FTP, no. 1, 1982, 134-135.
- 630. Gorodnichenko, O.K., N.K. Dryapiko, V.F. Kovalenko, and G.P. Peka (0).

  Diffusion depths in variband n-Al<sub>x</sub>Ga<sub>1-x</sub>As solid solutions as a

  function of concentration. UFZh, no. 2, 1982, 267-269.
- 631. Ivakin, Ye.V., and A.I. Kitsak (0). Increasing the contrast of an image recorded through a scattering layer in partially coherent light.

  018, v. 52, no. 1, 1982, 99-102.
- 632. Kaarli, R., and A. Rebane (0). Anomalous intensity amplification of S<sub>2</sub>
  fluorescence during two-step excitation of various polymethine dyes by
  picosecond laser pulses. IAN Est, no. 3, 1981, 290-293. (RZhF, 1/82, 10888)

- 633. Kachurin, G.A., Ye.V. Nidayev, and A.I. Popov (6). Study on laser annealing of radiation defects using capacitance spectroscopy.

  FTP, no. 1, 1982, 22-26.
- 634. Kalinin, A.P., V.B. Leonas, and I.D. Rodionov (0). Current status

  and prospects for using small-angle differential scattering of fast

  beams to study short-range intermolecular forces. Sb 23, 55-62.
- 635. Kaplyanskiy, A.A., and A.V. Akimov (4). Study on the elementary properties of resonant electron-phonon interaction in luminescing doped crystals. IAN Fiz, no. 2, 1982, 286-294.
- 636. Katrunov, K.A., V.M. Koshkin, and V.M. Kulakov (188). Charge transfer and luminescence of intercalated PbI crystals. UFZh, no. 2, 1982, 226-229.
- 637. Kitay, M.S. (426). Linear transitions to highly excited valence vibrations of molecular groups. KE, no. 2, 1982, 308-315.
- 638. Klemm, E., "lemm, J. Kleinschmidt, and A. Graness (NS). Study on the effect of substituents on the lifetime of the polymethine dye form of photochromic dinitrobenzylpyridine. Zeitschrift für physikalische chemie (DDR), no. 4, 1981, 621-624. (RZhF, 2/82, 2D978)
- 639. Klimzo, E.F., E.N. Sergeyeva, I.I. Kononenko, and T.G. Ovechkina (0).

  Study on deviations of extra fine-grained emulsions from the law of

  interchangeability, depending on the structure of sensitized dyes.

  Sb 29, 56-60. (RZhF, 2/82, 2D1280)

- 640. Kostyshin, M.T., and Yu.V. Ushenin (6). <u>Diffusion-controlled</u>

  sensitivity of As<sub>2</sub>S<sub>3</sub>-Ag systems to irradiation through a metal.

  PTP, no. 1, 1982, 19-21.
- 641. Kostyshin, M.T., and Yu.V. Ushenin (0). <u>He-Ne laser radiation-stimulated diffusion of Ag into vitreous As 2S 3.</u> PSS, v. A66, no. 1, 1981, K47-K50. (RZhF, 2/82, 2Ye1077)
- 642. Kovalenko, V.F., P.S. Kuts, and V.P. Sokhatskiy (51). Polarizationdependent optically induced change in the domain structure of a

  Y<sub>3</sub>Fe<sub>5-x</sub>Si<sub>x</sub>O<sub>12</sub> plate. FTT, no. 1, 1982, 145-148.
- 643. Kozlov, A.N., L.S. Korniyenko, A.L. Kotkin, V.V. Mayorshin, Yu.V. Pavlov, and R.M. Umarkhodzhayev (98). Observing transient signals of magnetic resonance during optical polarization. VMU, no. 1, 1982, 100-102.
- 644. Kuz'min, V.N., and V.A. Babenko (0). Rules for the behavior of angular characteristics of optical scattering by crystalline particles in a weak anisotropy approximation. ZhPS, v. 36, no. 2, 1982, 305-309.
- 645. Lisitsa, M.P., N.R. Kulish, A.F. Maznichenko, and B.M. Bulakh (6).

  Mechanism for optical absorption saturation in CdSe. FTP, no. 2,

  1982, 274-277.
- 646. Logginov, A.S., and G.A. Nepokoychitskiy (0). Superhigh velocities

  for magnetic moment reversal waves in iron garnet films. ZhETF P,

  v. 35, no. 1, 1982, 22-24.

- 647. Lutoshkin, V.I. (512). Evaluating vibrational anharmony during the effect of laser radiation on molecules with degenerate electron states. TiEKh, no. 1, 1982, 94-98.
- 648. Permogorov, S.A. (4). <u>Laser narrowing of exciton luminescence in</u>

  semiconductors. IAN Fiz, no. 2, 1982, 388-393.
- 649. Petrov, A.V., V.I. Bocharníkov, E.E. Godik, and V.P. Sipis (15).

  Photodielectric effect coupled with excited acceptor states in germanium. FTP, no. 1, 1982, 184-187.
- 650. Rautian, S.G., V.P. Safonov, and B.M. Chernobrod (75). Effect of energy level degeneracy on cooperative Raman scattering of light.

  ZhETF P, v. 35, no. 4, 1982, 144-146.
- 651. Sapozhnikov, M.N., V.I. Alekseyev, N.A. Kirichenko, V.M. Shustryakov, V.K. Podymov, and L.A. Piruzyan (0). <u>Luminescence of biogenic</u>

  porphyrins under selective resonant laser excitation. DAN SSSR, v. 262, no. 1, 1982, 90-94.
- 652. Shmiglyuk, M.I., P.I. Bardetskiy, and I.G. Mustya (0). Spontaneous exciton emission from a Cu<sub>2</sub>O crystal in a resonant laser wave field.

  IAN M. no. 2, 1981, 74-76. (RZhF, 1/82, 1D946)
- 653. Timmermans, C.W.M., and G. Blasse (NS). <u>Luminescence of Cs<sub>2</sub>Bi<sub>2</sub>Br<sub>9</sub></u>
  single crystals. PSS, V. B106, no. 2, 1981, 647-655. (RZhF, 1/82, 1D955)

- 654. Trifonov, Ye.D., A.S. Troshin, and V.A. Malyshev (0). Theory on radiationless excitation migration of impurity atoms in condensed media. Sb 30, 98~110. (RZhF, 2/82, 2D997)
- 655. Vaganov, A.B., and Yu.I. Chalisov (0). Optical control of a superconducting commutator. ZhTF P, no. 1, 1982, 26-29.
- 656. Vasil'chenko, G.N., and A.M. Mikhal'chuk (106). Study on the temperature dependence of the optical properties of lithium, barium and calcium fluorides. Sb 2, 146-150.
- 657. Vedernikov, V.I., V.M. Gryaznov, S.G. Gul'yanova, L.N. Deryugin, A.A.

  Tishchenko, and A.I. Chernyay (14). Use of thin film resonant systems

  to study the interaction of gas with metal and semiconductor surfaces.

  ZhFKh, no. 2, 1982, 481-483.
- 658. Veletskas, D., I. Kapturauskas, and R. Baltrameyunas (49). Optically-induced thermal gratings and the thermooptic effect in nematic mesophase liquid crystals. ZhTF, no. 2, 1982, 406-408.
- 659. Vladimirov, F.L., and N.I. Pletneva (0). Optical nonlinearity of a photosemiconductor-liquid crystal structure. ZhTF, no. 2, 1982, 392-393.
- 660. Vo Khong An' (52). Excitation of surface polaritons by laser radiation in semiconductors with sharp forbidden zones. FTP, no. 1, 1982, 82-89.
- Vogler, K. (NS). <u>Two-photon absorption of F-centers in KCL</u>. PSS,
   v. B107, no. 1, 1981, 195-199. (RZhF, 2/82, 2D1570)

- dependency of the absorption coefficient of liquids on pressure and temperature. 01S, v. 52, no. 1, 1982, 95-98.
- 663. Zakharchenya, B.P. (4). <u>Luminescence of semiconductors under</u>

  conditions of optical cooling of nuclear spin systems. IAN Fiz,
  no. 2, 1982, 394-398.

## 3. Laser Spectroscopy

- of double optical scattering to the intensity of the Rayleigh line wing in the critical region. OiS, v. 52, no. 1, 1982, 91-94.
- 665. Afanas yeva, N.I., V.M. Burlakov, Ye.A. Vinogradov, A.F. Goncharov, and G.N. Zhizhin (72). Phonon spectrum of an SbSI crystal in the area of a ferroelectric phase transition. Ordering parameter.

  FTT, no. 1, 1982, 211-216.
- 666. Agal'tsov, A.M., V.S. Gorelik, and T.F. Fayzullov (1). Method of studying Raman scattering in semiconductor crystals using a copper vapor laser. KSpF, no. 2, 1982, 18-23.
- 667. Akopyan, I.Kh., and B.V. Novikov (12). Characteristics of phase transition in superionic Ag<sub>2</sub>HgI<sub>4</sub> and Cu<sub>2</sub>HgI<sub>4</sub> crystals. FTT, no. 2, 1982, 591-594.
- 668. Akul'shin, A.M., V.L. Velichanskiy, A.S. Zibrov, V.V. Nikitin, V.A. Sautenkov, G.G. Kharisov, and Ye.K. Yurkin (0). <u>Using semiconductor lasers for high-resolution spectroscopy</u>. Sb 4, 46-47. (RZhRadiot, 2/82, 2Ye516)

- 669. Aleksandrov, V.V., K.N. Baranskiy, O.I. Vasil'yeva, T.S. Velichkina,

  A.N. Izrailenko, and I.A. Yakovlev (0). Brillouin scattering spectrum
  in urotropin single crystals. OiS, v. 52, no. 2, 1982, 193-195.
- 670. Ambartsumyan, R.V., S.A. Akhmanov, A.M. Brodnikovskiy, S.M. Gladkov, A.V. Yevseyev, V.N. Zadkov, M.G. Karimov, N.I. Koroteyev, and A.A. Puretskiy (2,72). Coherent active spectroscopy of polyatomic molecules using multiphoton IR excitation. ZhETF P, v. 35, no. 4, 1982, 170-173.
- 671. Apanasevich, P.A., V.V. Kvach, V.P. Kozich, and V.A. Orlovich (0).

  Active Raman spectrometer based on pulsed narrowband dye lasers.

  ZhPS, v. 36, no. 2, 1982, 215-220.
- 672. Antonov, V.S. (0). Effect of the nuclear configuration of molecules
  in electronically excited states on the character of two-step
  ionization processes. 0iS, v. 52, no. 1, 1982, 10-12.
- 673. Artamonov, V.V., A.P. Litvinchuk, V.I. Sidorenko, and N.I.

  Vitrikhovskiy (6). Raman scattering in Mg\_Cd\_1\_xSe crystals.

  UFZh, no. 1, 1982, 27-30.
- 674. Artamonov, V.V., and L.I. Berezhinskiy (6). Scattering of coherent radiation in bismuth vanadate. UFZh, no. 2, 1982, 288-289.
- 675. Asimov, M.M., V.N. Gavrilenko, and A.N. Rubinov (0). Measuring the characteristics of T-T absorption in ethanol solutions of rhodamine 3B.

  O1S, v. 52, no. 2, 1982, 258-262.

- 676. Azatyan, V.V., K.I. Gaganidze, S.A. Kolesnikov, and G.R. Trubnikov (67). Detecting HO<sub>2</sub> radicals by laser magnetic resonance in a rarefied hydrogen-oxygen flame. Kinetika i kataliz, no. 1, 1982, 244-245.
- 677. Babonas, G.A., Yu.G. Zaretskiy, G.A. Kurbatov, and Yu.I. Ukhanov (29).

  Raman spectra of Bi<sub>12</sub>SiO<sub>20</sub> and Bi<sub>12</sub>GeO<sub>20</sub>. FTT, no. 2, 1982, 626-628.
- 678. Balitskiy, A.I., A.S. Krochuk, I.M. Stakhira, and A.V. Franiv (114).

  High-temperature structural phase transition in GaSe single crystals.

  FTT, no. 1, 1982, 76-80.
- 679. Baran, J., Z. Czapla, M.M. Ilczyszyn, and H. Ratajczak (NS).

  Infrared and polarized Raman spectra of ferroelectric RbHSeO<sub>4</sub>.

  APP, v. A59, no. 6, 1981, 753-764. (RZhF, 2/82, 2D856)
- 680. Baranov, A.V., and Ya.S. Bobovich (7). Higher-order giant Raman scattering. ZhETF P, v. 35, no. 4, 1982, 149-150.
- 681. Basov, N.G., M.A. Gubin, V.V. Nikitin, A.V. Nikul'chin, V.N.

  Petrovskiy, Ye.D. Protsenko, and D.A. Tyurikov (1). Highly sensitive method based on the frequency characteristics of a two-mode gas laser with nonlinear absorption for separating out hyperfine spectral lines.

  Fizicheskiy institut AN SSSR. Preprint, no. 183, 1981, 23 p. (RZhF, 2/82, 2D1663)
- 682. Belovolov, M.I., Ye.M. Dianov, A.A. Kuznetsov, and A.V. Kuznetsov (1).

  Experimental fiber-optic communication line with spectral multiplexing of LED radiation using a diffraction grating. KE, no. 2, 1982, 418-420.

- 683. Belyy, M.U., I.Ya. Kushnirenko, and B.A. Okhrimenko (51).

  Achievements and problems in the study of luminescence from electrolyte solutions. IAN Fiz, no. 2, 1982, 373-379.
- 684. Belyy, N.M., I.S. Gorban', V.A. Gubanov, Yu.F. Lavorik, V.F. Orlenko, T.N. Sushkevich, V.V. Filonenko, and V.V. Frizel' (51). <u>Davydov</u> splitting of phonon states in layered PbI<sub>2</sub> and SnS<sub>2</sub> crystals.

  FTT, no. 2, 1982, 539-540.
- 685. Benderskiy, V.A., V.Kh. Brikenshteyn, and P.G. Filippov (0). Resonant hot energy transfer in doped molecular crystals. Ois, v. 52, no. 2, 1982, 276-281.
- 686. Bert, N.A., A.T. Gorelenok, A.G. Dzigasov, S.G. Konnikov, V.N.

  Mdivani, I.S. Tarasov, and A.S. Usikov (4). <u>Determining elastic</u>

  stress and values for lattice parameter discrepancies in InGaAsP/InP

  heterostructures by polarization luminescence. FTP, no. 1, 1982,

  60-67.
- 687. Bezuglov, N.N., and A.N. Klyucharev (0). Choosing the optimum frequency range for optical pumping of a dense medium with directed optical beams. OiS, v. 52, no. 1, 1982, 29-32.
- 688. Blinova, G.K., R.Yu. Orlov, and M.Ye. Uspenskaya (2). Study on ordering in plagioclases using a Raman scattering method. VMU Geologiya, no. 1, 1982, 61-66.

- Spectrometer for coherent anti-Stokes Raman spectroscopy using a copper vapor laser. ZhPS, v. 36, no. 2, 1982, 334-336.
- 690. Bonch-Bruyevich, A.M., T.A. Vartanyan, and V.V. Khromov (0). Spectral kinetic evidence for nonadiabatic coupling of molecular states under conditions of fast molecular relaxation. ZhETF, v. 82, no. 1, 1982, 101-108.
- 691. Borysow, A., and T. Grycuk (NS). Raman spectrum of Hg Van der Waals
  molecules. APP, ... A60, no. 1, 1981, 129-139. (RZhF, 2/82, 2D711)
- 692. Bulatov, V.P., S.I. Zavorotnyy, A.A. Ovchinnikov, O.M. Sarkisov,

  E.A. Sviridenkov, A.I. Trostin, and S.G. Cheskis (67). Pulsed highresolution device for intracavity laser spectroscopy. KE, no. 2,

  1982, 427-429.
- 693. Carius, W., and O. Schroeter (NS). Characterizing the boundary layer of benzene molecules by total reflection Raman spectroscopy.

  Zeitschrift für physikalische chemie (DDR), no. 4, 1981, 711-714.

  (RZhF, 2/82, 2D726)
- 694. Delyukov, A.A., G.V. Klimusheva, N.A. Tripachko, and A.V. Turchin (5).

  Nonequilibrium phosphorescence of defects in crystalline benzophenone
  in a pulsed magnetic field. FTT, no. 2, 1982, 568-573.
- Anharmonic effects in polariton spectra of hyper-Raman scattering in calcite crystal. ZhETF, v. 82, no. 2, 1982, 406-420.

- 696. D'ordyay, V.S., I.I. Nebolla, and V.Yu. Slivka (0). Second order

  Raman scattering in InPS, crystals. Deposit at VINITI, no. 4390-81,
  9 Sep 1981, 12 p. (RZhF, 1/82, 1D821)
- 697. Fadeyev, V.V., A.M. Chekalyuk, and V.V. Chubarov (2). Nonlinear

  laser fluorimetry of complex organic compounds. DAN SSSR, v. 262,
  no. 2, 1982, 338-341.
- 698. Fistul', V.I., V.B. Ufimtsev, V.V. Arbenina, M.M. Kudasova, and T.A. Ukharskaya (179). Solid solutions in a Cd-Ga-Sb system. NM, no. 2, 1982, 197-202.
- 699. Gaplevskaya, S.P., L.S. Zavertannaya, T.G. Krivko, A.L. Rvachev, and A.P. Sakalas (200). Metastable states in p-type cadmium sulfide.

  FTP, no. 1, 1982, 98-102.
- 700. Gerasimov, V.P. (11). Study on the Raman spectra and lattice dynamics of complex molecular crystals. Kazanskiy GU. Dissertation, 1980, 20 p. (KLDVAD, 2/82, 2032)
- 701. Gladkov, L.L., N.M. Ksenofontova, K.N. Solov'yev, A.S. Starukhin, and A.M. Shul'ga (3). Method for determining the type of symmetry in vibrational transitions of molecules containing porphyrin chromophores. Othr izobr, no. 6, 1982, 905659.
- 702. Golovenchits, Ye.I., and V.A. Sanina (4). Optical absorption spectra of EuCrO<sub>3</sub>. FTT, no. 2, 1982, 375-383.

- 703. Gorelik, V.S., V.B. Divak, and M.M. Sushchinskiy (1). Method for observing Raman scattering by polaritons using oblique beams.

  KSpF, no. 2, 1982, 29-34.
- 704. Grasyuk, A.Z., Yu.I. Karev, and L.L. Losev (1). Measuring the rotational relaxation time for compressed hydrogen. KE, no. 1, 1982, 174-176.
- 705. Gurvich, A.M., V.B. Guman, M.A. Il'ina, V.P. Kavtorova, R.V. Katomina, M.G. Myagkova, and T.I. Savikhina (0). Luminescence of crystalline phosphors based on mixed barium and strontium halides doped with europium. OiS, v. 52, no. 2, 1982, 289-296.
- 706. Ismailov, T.G. (60). Theory of interband Raman scattering and light

  absorption in Hg<sub>1-x</sub>Cd Te solid solutions. Institut fiziki AN AzSSR.

  Dissertation, 1980, 15 p. (KLDVAD, 2/82, 2053)
- 707. Ivanov, E.I., I.R. Krylov, and Yu.M. Savel'yev (0). <u>Differential</u>

  variant on a method for saturation absorption of a weak opposed wave.

  01S, v. 52, no. 2, 1982, 340-344.
- 708. Iyevskaya, N.M., L.S. Korniyenko, A.L. Kotkin, V.I. Malakhova, R.M. Umarkhozhdayev, and S.D. Yakubovich (98). The shape of cesium D<sub>2</sub>

  lines observed by a semiconductor laser. KE, no. 2, 1982, 386-388.
- 709. Izosimov, I.N., Yu.V. Naumov, and N.A. Shishunov (441). <u>Time-of-flight laser spectrometer</u>. IAN Fiz. no. 1, 1982, 182-186.

- 710. Karpov, S.V., A.V. Khassan Ali, and A.A. Shultin (12). <u>Thermally induced disordering and phase transition in potassium thiocyanate crystal</u>. PTT, no. 1, 1982, 72-75.
- 711. Kasatkin, V.A., F.P. Kesamanly, V.N. Romanov, and B.Ye. Samorukov (29). Recombination radiation from Zn-O complex coupled excitons in GaP. FTP, no. 1, 1982, 135-138.
- 712. Khakhayev, A.D., and D.V. Yelakhovskiy (0). <u>Inelastic collision</u>
  processes of excited atoms of inert gases. Sb 23, 130-146.
- 713. Kirillov, S.A., L.V. Skrypnik, V.D. Prisyazhnyy, and A.N. Agulyanskiy (512). Vibrational spectra of sodium monofluorophosphate in the region of PO<sub>2</sub>F<sup>2-</sup> ion valence vibrations. ZhNKh, no. 1, 1982, 25-29.
- 714. Kondratov, O.I., Ye.A. Nikonenko, I.I. Olikov, and L.N. Margolin (42). Analysis of vibrational spectra of MC<sub>2</sub>O<sub>4</sub>·2H<sub>2</sub>O [M=Fe<sup>II</sup>,Ni<sup>II</sup>] oxalate dihydrates with tetradentate oxylate groups. ZhNKh, no. 1, 1982, 128-134.
- 715. Kotorlenko, L.A., and V.S. Aleksandrova (632). Spectral signature of a change in the electron configuration to the phenol-phenolate-anion-phenoxyl radical. TiEKh, no. 1, 1982, 115-118.
- 716. Kozlov, D.N. (118). Coherent high-resolution Raman spectroscopy of tetrahedral molecules. Moskovskiy fiziko-tekhnicheskiy institut.

  Dissertation, 1980, 14 p. (KLDVAD, 1/82, 476)

- 717. Ksandopulo, G.I., A.M. Udartsev, G.N. Musiyenko, and S.M. Mashakova
  (0). Using intracavity laser spectroscopy to detect europium in a
  flame. ZhPS, v. 36, no. 2, 1982, 203-205.
- 718. Lebedev, A.D., A.V. Lomakin, V.A. Noskin, and B.P. Sharonov (0).

  Recording the non-Gaussian component of the spectrum of intensity

  fluctuations of scattered light, using a coupled correlation method.

  OiS, v. 52, no. 2, 1982, 195-197.
- 719. Lisitsa, M.P., S.A. Boyko, S.F. Terekhova, and Z.L. Denisova (0).

  Dispersion of the refractive index for CdS in the region of exciton

  transitions. ZhPS, v. 36, no. 1, 1982, 100-105.
- 720. Matveyenko, I.D. (159). Apparatus and methods for recording relaxation processes and photon echo. Sb 2, 115-119.
- 721. Mirumyants, S.O. (0). Quasi-linear fluorescent spectra of complex molecules in the gas phase. IAN Fiz, no. 2, 1982, 330-337.
- 722. Moskalenko, N.I., and S.N. Parzhin (0). Study on the absorption

  spectra of CO<sub>2</sub> at elevated pressures. Sb 1, 110-113. (RZhRadiot, 1/82, 1Ye414)
- 723. Moskalenko, N.I., O.V. Zotov, and V.S. Makarov (NS). <u>Intensities and halfwidths of the line of vibrational-rotational bands of NH</u><sub>3</sub>.

  Sb 1, 114-117. (RZhRadiot, 1/82, 1Ye429)
- 724. Motsnyy, F.V. (6). Nature of the 1.34 µm emission band in the spectrum of layered Bil, single crystals. UFZh, no. 1, 1982, 133-135.

- 725. Oles, B., H.J. Stolz, and H.G. von Schnering (NS). Raman spectra of

  CaAs<sub>3</sub>, EuAs<sub>3</sub>, SrAs<sub>3</sub>, BaAs<sub>3</sub>, and α-EuP<sub>3</sub> and the mixed phases,

  Eu<sub>1-X</sub>Sr<sub>-X</sub>Ss<sub>3</sub>, and Eu(P<sub>1-X</sub>As<sub>X</sub>)<sub>3</sub>. PSS, v. B106, no. 1, 1981, 157-170.

  (RZhF, 1/82, 1D822)
- 726. Peresh, Ye.Yu., L.S. Shpyrko, V.I. Tkachenko, V.I. Starosta, A.A. Kikineshi, K.A. Batori, and V.S. D'ordyay (136). Production and properties of Tl.GeS, and Tl.GeSe, single crystals. ZhNKh, no. 2, 1982, 473-476.
- 727. Personov, R.I. (72). <u>Selective spectroscopy of complex molecules in solutions and its application</u>. Institut spektroskopii AN SSSR.

  Preprint, no. 14, 1981, 67 p. (RZhF, 2/82, 2D543)
- 728. Pyatosin, V.Ye., M.P. Tsvirko, K.N. Solov'yev, and T.F. Kachura (0).

  Study on the optical physics of porphyrin complexes with rare earths,

  using nanosecond absorption spectroscopy. OiS, v. 52, no. 2, 1982,

  269-275.
- 729. Rutkovskiy, K.S., and K.G. Tokhadze (0). Relaxation of vibrational energy and non-steady-state absorption spectra of CD, and CD, F in cryogenic solution. OiS, v. 52, no. 2, 1982, 180-181.
- 730. Samoylov, I.B., and V.P. Bogoslovskiy (0). <u>Combustion characteristics</u> of homogeneous mixtures in a turbulent flow. FGiV, no. 1, 1982, 42-45.
- 731. Sautenkov, V.A., V.L. Velichanskiy, A.S. Zibrov, V.V. Nikitin, N.V. Senkov, and D.A. Tyurikov (1). Intra-Doppler resonances of selected reflections from low pressure cesium vapor. KSpF, no. 2, 1982, 13-17.

- 732. Shabanov, V.F., P.G. Shkuryayev, and A.N. Vtyurin (210). Raman scattering of light in incommensurate phases of ferroelectrics.

  DAN SSSR, v. 260, no. 4, 1981, 867-870.
- 733. Shcherbinina, V.N. (383). Intensity of laser-excited Raman spectra of powders. Sb 2, 137-141.
- 734. Sidorov, N.V., and E.I. Mukhtarov (0). Study on the pre-melt region in a diphenyl crystal by temperature variation in the Raman spectra.

  ZhPS, v. 36, no. 1, 1982, 154-157.
- 735. Smolenskiy, G.A., I.G. Siniy, S.D. Prokhorova, Ye.G. Kuz'minov, and A.A. Godovikov (4). New phase transition in proustite. Kristal, no. 1, 1982, 140-145.
- 736. Stefanovich, V.A., L.A. Rebane, K.Ye. Khaller, and V.Yu. Slivka (136).

  Spectroscopic detection of small distortions in the symmetry of

  Tl<sub>3</sub>AsS, crystals. FTT, no. 2, 1982, 370-374.
- 737. Stepanov, B.I., A.N. Rubinov, and V.I. Tomin (3). Study on dynamic inhomogeneous oriented broadening of electron levels in dye solutions, using high resolution spectroscopy. IAN Fiz, no. 2, 1982, 380-387.
- 738. Studenov, V.I., I.V. Piterskaya, and N.G. Bakhshiyev (0). Effect of temperature and aggregate state of a solvent on the spectral fluorescence of concentrated solutions of complex organic compounds.

  OiS, v. 52, no. 1, 1982, 79-83.

- 739. Tikhomirova, N.K. (2). Studying fermentative catalysis by mathematical modeling and laser spectroscopy. Moskovskiy GU. Dissertation, 1981, 22 p. (KLDVAD, 1/82, 537)
- 740. Tsyashchenko, Yu.P., V.D. Danchuk, and G.Ye. Krasnyanskiy (51).

  Raman spectra of CrO<sub>4</sub><sup>2-</sup> and SO<sub>4</sub><sup>2-</sup> impurity ions in alkali halide

  crystals. UFZh, no. 1, 1982, 18-22.
- 741. Tumanova, L.M. (167). Raman spectra of adsorbed unsaturated compounds
  on nickel and silver films at a low temperature. Institut neftekhimicheskogo sinteza AN SSSR. Dissertation, 1981, 24 p. (KLDVAD, 1/82,
  619)
- 742. Valakh, M.Ya., A.P. Litvinchuk, and N.I. Vitrikhovskiy (6).

  Luminescence and phonon spectra of Mn<sub>x</sub>Cd<sub>1-x</sub>Se crystals. FTT,

  no. 1, 1982, 281-283.
- 743. Varshal, B.G., V.N. Denisov, B.N. Mavrin, V.B. Podobedov, and Kh.Ye. Sterin (72,232). Hyper-Raman scattering by polaritons in inorganic glasses. FiKhS, no. 1, 1982, 115-118.
- 744. Vinogradov, Ye.A., G.N. Zhizhin, I.I. Khammadov, A.N. Penin, and I.V. Mityusheva (72). Dispersion of dielectric permittivity in gadolinium molybdate. FTT, no. 1, 1982, 103-107.
- 745. Vinogradov, Ye.A., N.M. Gasanly, A.F. Goncharov, G.N. Zhizhin, N.N. Mel'nik, V.V. Panfilov, A.S. Ragimov, and S.I. Subbotin (238,72).

  Raman scattering under pressure, and the ferroelastic properties of InS single crystals. FTT, no. 1, 1982, 139-144.

- 746. Volkov, V.Ye., L.L. Zhidkov, and I.S. Kolomnikov (634). Raman spectra of mercury(I) acetate and trichloroacetate in the low frequency region.

  ZhNKh, no. 2, 1982, 363-366.
- 747. Voropay, Ye.S., A.M. Sarzhevskiy, and P.A. Torpachev (87). <u>Technique</u>

  for an experiment in multiphoton absorption spectroscopy. Part 2.

  Quasi-direct methods for studying two-photon absorption. Deposit at

  VINITI, no. 2862-81, 4 Aug 1981, 51 p. (RZhF, 1/82, 1D1497)
- 748. Voropay, Ye.S., A.M. Sarzhevskiy, and P.A. Torpachev (87). <u>Technique</u>

  for an experiment in multiphoton absorption spectroscopy. Part 3.

  <u>Direct methods for studying two-photon absorption</u>. Deposit at

  VINITI, no. 4123-81, 19 Aug 1981, 29 p. (RZhF, 1/82, 1D1498)
- 749. Voropay, Ye.S., A.A. Kirsanov, V.A. Sayechnikov, and A.M. Sarzhevskiy
  (0). Study on the spectral characteristics of luminescence from
  complex molecular solutions, using optical quenching. ZhPS, v. 36,
  no. 2, 1982, 230-236.
- 750. Vratskiy, B.A., A.N. Kolerov, Ye.Ye. Kuz'mina, and B.V. Melkumyan (0).

  Multichannel laser spectrum analyzer using dye solutions and color

  centers. Sb 1, 86-87. (R2hRadiot, 1/82, 1Ye362)
- 751. Yeremenko, A.M., N.P. Smirnova, A.G. Tropinov, and A.A. Chuyko (632).

  Study on photoluminescence of amorphous silica doped with aluminum.

  TiEKh, no 1, 1982, 125-129.

- 752. Zasavitskiy, I.M., Yu.V. Kosichkin, A.N. Perov, Yu.A. Polyakov, A.M. Shirokov, and A.P. Shotov (1). Methodological problems in using semiconductor injection lasers for high-resolution IR spectroscopy. Fizicheskiy institut AN SSSR. Preprint, no. 150, 1981, 32 p. (RZhF, 2/82, 2D1680)
- 753. Zavt, G.S., and N.N. Kristofel' (0). Dynamics of an impurity molecule
  in a crystal. Sb 30, 71-82. (RZhF, 2/82, 2Ye308)
- 754. Zlobina, L.I., V.S. Gorelik, and V.A. Yurin (1). Raman scattering of light in triglycine sulfate crystals. Fizicheskiy institut

  AN SSSR. Preprint, no. 114, 1981, 30 p. (RZhF, 2/82, 2D928)
- J. BEAM-TARGET INTERACTION

## 1. Metal Targets

- 755. Aleksandrov, Ye.I., and V.P. Tsipilev (0). Effect of the compacting pressure on the sensitivity of lead azide to the action of laser radiation. Deposit at VINITI, no. 4775-81, 13 Oct 1981, 14 p. (DR, 2/81, 387)
- 756. Basov, N.G., Kh.A. Bulibekov, V.S. Kazakevich, and I.B. Kovsh (1).

  Ejection of matter during boring of metals by pulsed CO laser radiation. KE, no. 2, 1982, 364-365.
- 757. Burmistrov, A.V. (0). Effect of a changing optical constant for an oxide on the heating dynamics of titanium by intense radiation.

  ZhTF P, no. 1, 1982, 29-33.

- 758. Chekanova, N.T. (440). Study on the effect of high-power CO<sub>2</sub> laser radiation on the structure and properties of cast iron used in automobile manufacture. Zavod-vtuz pri Moskovskom avtomobil'nom zavode. Dissertation, 1981, 18 p. (KLDVAD, 1/82, 991)
- 759. Dan'shchikov, Ye.V., V.A. Dymshakov, F.V. Lebedev, and A.V. Ryazanov

  (0). Breakdown of atomic gases by CO<sub>2</sub> laser radiation near a metal surface. KE, no. 1, 1982, 99-105.
- 760. Dan'shchikov, Ye.V., V.A. Dymshakov, F.V. Lebedev, and A.V. Ryazanov (0). Breakdown of atomic gases by CO<sub>2</sub> laser radiation near a metal surface. KE, no. 1, 1982, 106-110.
- 761. Gol'berg, S.M., and M.I. Tribel'skiy (174). Growth instability of absorptive oxide films on the surface of a metal heated by high-power IR radiation. ZhTF P, no. 3, 1982, 178-181.
- 762. Luksha, O.V., Yu.Yu. Firtsak, N.I. Dovgoshey, P.A. Fennich, I.P. Sharkan', and A.V. Mironos (136,16). Pulsed laser production and processing of oxygen-free ferroelectric films. NM, no. 2, 1982, 231-234.
- 763. Sadovskiy, V.D., T.I. Tabatchikova, A.V. Salokhin, and M.M. Malysh

  (421). Phase and structural transformations during laser heating of

  steel. Part 1. Effect of initial structure. Fizika metallov i

  metallovedeniye, no. 1, 1982, 88-94.
- 764. Volod'kina, V.L., and G.A. Kotov (30). Thermochemical heating mechanism for thin metal plates under optimal conditions. ZhTF, no. 1, 1982, 64-66.

### 2. Dielectric Targets

- 765. Balitskas, S.K., A.A. Zhilenis, I.A. Gul'binas, R.Yu. Krauyalis, and S.I. Yatsinavichyus (0). Study on structural transformations in optical glasses under the action of laser radiation. Sb 14, 86.

  (RZhRadiot, 1/82, 1/873)
- 766. Gagarin, A.P., L.B. Glebov, V.G. Dokuchayev, O.M. Yefimov, L.B.

  Popova, and M.N. Tolstoy (0). Effect of absorptive impurities on optical breakdown of transparent dielectrics. ZhTF no. 1, 1982, 101-104.
- 767. Koldunov, M.F., and S.F. Ulanov (0). Feasibility of determining the distribution of impurities by optical breakdown thresholds in transparent media. ZhTF, no. 1, 1982, 151-153.
- 768. Novikov, N.P. (176). Crack propagation from the effect of highintensity radiation. Fiziko-khimicheskaya mekhanika materialov, no. 1, 1982, 113-114.
- 769. Novikov, N.P., A.A. Bogdanov, B.K. Zuyev, L.L. Kunin, G.V. Mikhaylova, and N.N. Novikova (184). Gas formation in silicate glass under the effect of high-intensity radiation. DAN SSSR, v. 262, no. 2, 1982, 335-338.
- 770. Vlasov, R.A., and S.P. Zhvavyy (0). Role of two-photon absorption in optical avalanche breakdown. ZhPS, v. 36, no. 1, 1982, 72-76.

#### 3. Semiconductor Targets

771. Bayazitov, R.M., M.I. Ibragimova, and I.B. Khaybullin (38). Methods

for analyzing the temperature fields under pulsed optical irradiation

of semiconductor ion-doped layers. Deposit at VINITI, no. 471B-81,

8 Oct 1981, 20 p. (RZhF, 1/82, 1Ye1043)

#### 4. Miscellaneous Targets

- 772. Anisimov, S.I., S.M. Gol'berg, B.A. Malomed, and M.I. Tribel'skiy

  (73). Two-dimensional barely supercritical structures in laser

  sublimation waves. DAN SSSR, v. 262, no. 5, 1982, 1117-1120.
- 773. Apollonov, V.V., A.M. Prokhorov, V.Yu. Khomich, and S.A. Chetkin (1).

  Thermoelastic interaction of periodic pulsed laser radiation with a solid surface. KE, no. 2, 1982, 343-353.
- 774. Goetz, G., H.D. Geiler, M. Wagner, K.H. Heinig, and H. Wittenneck

  (NS). Laser annealing of thin buried amorphous layers in silicon.

  PSS, v. A65, no. 2, 1981, 677-682. (RZhF, 1/82, 1Ye1032)
- 775. Gorbunov, A.V., E.M. Nadgornyy, and S.N. Yayekovskiy (0). Laser pulse induced dislocation structure in ionic crystals. Part 1.

  Bulk damage of NaCl. PSS, v. A66, no. 1, 1981, 53-63. (RZhF, 1/82, 1Ye1038)
- 776. Gorbunov, A.V., E.M. Nadgornyy, and S.N. Yayekovskiy (0). Laser

  pulse induced dislocation structure in ionic crystals. Part 2.

  Surface damage of NaCl and MgO. PSS, v. A66, no. 2, 1981, 455-462.

  (RZhF, 1/82, 1Yel039)

- 777. Korotchenko, A.I., and A.A. Samokhin (1). Thermooptic effect in the vaporization of matter under the action of modulated radiation.

  KSpF, no. 7, 1981, 3-6. (RZhF, 1/82, 1D1584)
- 778. Kuznetsov, A.N. (0). Ways for improving the efficiency of the process

  of laser destruction of rock. Deposit at VINITI, no. 5209-81,

  12 Nov 1981, 13 p. (DR, 2/81, 202)
- 779. Lyubov, B.Ya., and E.N. Sobol' (0). Evaluating the melt and vaporization kinetics of a solid under the effect of a high energy flux. Fikhom, no. 1, 1982, 13-18.
- 780. Sainov, N.A., M.F. Galyautdinov, I.B. Khaybullin, and Ye.I. Shtyrkov (38). Using an electronograph to observe the kinetics of structural changes under the action of high-power light pulses. Deposit at VINITI, no. 4043-81, 17 Aug 1981, 7 p. (RZhF, 1/82, 1Ye879)
- 781. Sokol, A.A., V.M. Kosevich, and Ye.A. Lyubchenko (108). Structural and phase transformations in In<sub>2</sub>Te<sub>3</sub> thin films during annealing.

  NM. no. 2, 1982, 216-219.
- 782. Vaganova, R.G., V.A. Gabysheva, G.Ya. Koltanyuk, N.A. Lucheyev, G.P. Razumnaya, V.I. Trubitsyn, K.Ye. Karashokov, and A.F. Khudyshev (0). E-beam and laser welding of small membrane bellows. PSU, no. 2, 1982, 35-37.
- 783. Wollschlaeger, K., L. Zollfrank, and U. Jahn (NS). <u>Laser beam</u>
  homogenization by a scattering screen and a diffusely reflecting
  lightguide tube. ETP, no. 4, 1981, 405-411. (RZhRadiot, 2/82, 2Ye511)

- 784. Zacherpe, P.G. (NS). Thermal conductivity model for laser irradiation of materials. Feingeraetetechnik, no. 8, 1981, 365-369. (RZhRadiot, 1/82, 1Ye393)
- K. PLASMA GENERATION AND DIAGNOSTICS
  - 785. Abzayev, F.M., N.N. Beznasyuk, V.G. Bezuglov, A.V. Bessarab, A.V. Veselov, L.M. Vinogradskiy, V.A. Gaydash, I.V. Galakhov, A.S. Gasheyev, V.A. Yeroshenko, A.I. Zaretskiy, G.A. Kirillov, S.B. Kormer, G.G. Kochemasov, S.M. Kulikov, Yu.V. Kuratov, V.M. Murugov, V.D. Nikolayev, G.P. Okutin, V.I. Pankratov, V.T. Punin, N.N. Rukavishnikov, A.V. Ryadov, V.A. Samylin, A.V. Senik, S.A. Sukharev, and A.I. Funtikov (0). Irradiation of spherical microtargets by 2-terawatt iodine laser radiation. ZhETF, v. 82, no. 2, 1982, 459-461.
  - 786. Afanas'yev, Yu.V., and N.G. Basov (0). <u>Laser fusion</u>. Sb 31, 131-149. (RZhF, 1/82, 1G183)
  - 787. Afanas'yev, Yu.V., V.F. Kovalev, V.V. Pustovalov, and A.B. Romanov

    (1). Nonlinear self-simulating perturbations in an inhomogeneous

    plasma. Fizicheskiy institut AN SSSR. Preprint, no. 118, 1981, 61 p.

    (RZhF, 1/82, 1671)
  - 788. Afanas'yev, Yu.V., V.F. Kovalev, V.V. Pustovalov, and A.B. Romanov

    (1). Nonlinear Langmuir disturbances in an inhomogeneous plasma.

    ZhETF, v. 82, no. 1, 1982, 109-116.

- 789. Afanas'yev, Yu.V., N.G. Basov, Ye.G. Gamaliy, V.B. Rozanov, A.A. Samarskiy, and L.P. Feoktistov (1). Physical processes in the heating and compression of a spherical target under the action of laser radiation. Tr 10, 3-9.
- 790. Afanas'yev, Yu.V., Ye.G. Gamaliy, and V.B. Rozanov (1). <u>Basic</u>
  equations for the dynamics and kinetics of a laser plasma.

  Tr 11, 10-31.
- 791. Afanas'yev, Yu.V., Ye.G. Gamaliy, N.N. Demchenko, and V.B. Rozanov

  (1). Absorption of laser radiation by a spherical target, allowing for refraction and developed hydrodynamics. Tr 11, 32-41.
- 792. Afanas'yev, Yu.V., Ye.G. Gamaliy, N.N. Demchenko, and V.B. Rozanov

  (1). Physical correlations in the "corona" of spherical laser

  targets. Tr 11, 42-49.
- 793. Afanas'yev, Yu.V., Ye.G. Gamaliy, and V.B. Rozanov (1). Hydrodynamic efficiency. Tr 11, 50-51.
- 794. Afanas'yev, Yu.V., Ye.G. Gamaliy, S.Yu. Gus'kov, and V.B. Rozanov (1).

  Approximate theory on the compression and similitude relationship for thin-shelled targets. Tr 11, 52-65.
- 795. Afanas'yev, Yu.V., N.G. Basov, P.P. Volosevich, Ye.G. Gamaliy, O.N. Krokhin, S.P. Kurdyumov, V.B. Rozanov, and A.A. Samarskiy (1).

  Extreme physical conditions in the process of laser-induced thermonuclear combustion. Tr 11, 98-99.

- 796. Afanas'yev, Yu.V., Ye.C. Gamaliy, I.G. Lebo, and V.B. Rozanov (1).

  Parameters of a laser plasma near the physical threshold of a

  thermonuclear reaction. Tr 11, 100-102.
- 797. Afanas'yev, Yu.V., G.A. Vergunova, P.P. Volosevich, Ye.G. Gamaliy, S.Yu. Gus'kov, N.N. Demchenko, V.B. Rozanov, V.F. Tishkin, and A.P. Favorskiy (1). Compression of gas-filled glass targets under hydrodynamic conditions at an absorption energy level of 20-40 joules. Tr 11, 103-114.
- 798. Afanas'yev, Yu.V., P.P. Volosevich, Ye.G. Gamaliy, N.V. Zmitrenko, S.P. Kurdyumov, V.B. Rozanov, and L.P. Feoktistov (1). Theoretical analysis of the possible existence of a thermonuclear "burst" in a laser target at an energy of approximately 10<sup>5</sup> joules.

  Tr 11, 167-176.
- 799. Aleksandrov, V.V., M.V. Brenner, V.D. Vikharev, N.G. Koval'skiy, M.I. Pergament, A.A. Chernov, V.N. Yufa, S.I. Anisimov, M.V. Ivanov, L.N. Shchur, and A.M. Rubenchik (0). Anomalous absorption and fast particles generation in laser--plasma interaction experiments at wavelengths of 0.53 and 1.06 µm. Sb 11, F4. (RZhF, 2/82, 2G292)
- 800. Allin, A.P., I.L. Doroshkevich, A.G. Kuchinskiy, V.M. Savchenko, Yu.V. Senatskiy, L.K. Subbotin, G.V. Sklizkov, and V.B. Taranchuk (1).

  Automation of the power supply system for the amplifier module of the "Del'fin" high-power laser device. Fizicheskiy institut AN SSSR.

  Preprint, no. 131, 1981, 47 p. (RZhRadiot, 1/82, 1Ye320)

- 801. Alum, Kh.P., Yu.V. Koval'chuk, G.V. Ostrovskaya, V.I. Smil'gyavichyus,
  A.S. Piskarskas, and I.A. Sokolov (0). Schlieren study of a laser

  spark in air formed by a series of picosecond laser pulses.

  ZhTF P. no. 3, 1982, 165-170.
- 802. Anan'in, O.B., Yu.A. Bykovskiy, V.P. Gusev, Yu.P. Kozyrev, I.V. Kolesov, A.S. Pasyuk, and V.D. Peklenkov (52). Study on the spatial and time characteristics of a laser plasma in a transverse magnetic field. Fizika plazmy, no. 1, 1982, 92-95.
- 803. Andreyev, N.Ye., A.M. Sergeyev, and A.M. Feygin (0). Resonance absorption of a strong e-m wave in a supersonic plasma flow.

  Sb 11, 12-15. (RZhF, 1/82, 1G187)
- 804. Andreyev, N.Ye., V.L. Artsimovich, Yu.S. Kas'yanov, V.V. Korobkin, V.P. Silin, P.V. Silin, G.L. Stenchikov, and A.S. Shirokov (0).

  Interaction efficiency of laser radiation with a disintegrating plasma corona. Sb 11, F5. (RZhF, 2/82, 2G303)
- 805. Andreyev, N.Ye., V.P. Silin, G.L. Stenchikov, and A.S. Shirokov (1).

  Interaction of short wavelength laser radiation with a plasma.

  Fizika plasmy, no. 1, 1982, 134-139.
- 806. Basov, N.G., M.V. Osipov, A.A. Rupasov, A.S. Shikanov, and G.V. Sklizkov (0). Study on the turbulence spectrum of an inhomogeneous plasma heated by a high-power laser. Sb 11, F18. (RZhF, 2/82, 2G321)

- 807. Basov, N.G., N.N. Demchenko, A.P. Favorskiy, Ye.G. Gamaliy, A.A. Kologrivov, V.B. Rozanov, A.A. Samarskiy, A.S. Shikanov, G.V. Sklizkov, V.F. Tishkin, and G.A. Vergunova (0). X-ray emission and spherical target image from inhomogeneous radiation (theory and experiment). Sb 11, F19. (RZhF, 2/82, 2G300)
- 808. Basov, N.G., A.Ye. Danilov, B.V. Kruglov, Yu.A. Mikhaylov, G.V. Sklizkov, and S.I. Fedotov (1). Start-up of the "Del'fin-1" laser fusion device. KE, no. 2, 1982, 395-398.
- 809. Bedilov, M.R., P.K. Khabibullayev, A. Kholbayev, and D. Kuramatov (0).

  Role of the angle of incidence of a laser beam on the formation of

  multicharged ions. DAN Uz, no. 8, 1981, 25-27. (RZhF, 2/82, 2D1647)
- 810. Bedilov, M.R., P.K. Khabibullayev, M.S. Sabitov, and R. Abdupatayev (85). Characteristics of the energy spectrum for hydrogen when forming multicharged ions in a laser plasma. IAN Uz. no. 1, 1982, 57-60.
- Blazhenkov, V.V. (1). Study on c-w x-radiation from a picosecond

  laser plasma by means of a multichannel automated device. Fizicheskiy
  institut AN SSSR. Dissertation, 1981, 19 p. (KLDVAD, 1/82, 433)
- 812. Borowiecki, M., S. Denus, J. Farny, H. Fiedorowicz, J. Godzik,
  S. Nagraba, W. Pawlowicz, L. Sulwinski, W. Szypula, A. Wilczynski,
  J. Wolowaki, and E. Woryna (NS). <u>Investigations of spherical laser</u>
  compression of plasma. Sb 11, F10. (RZhF, 2/82, 2G294)

- 813. Boyko, V.A., T.G. Lisina, S.A. Pikuz, I.Yu. Skobelev, and A.Ya.

  Fayenov (0). Intensity of the satellite structures near the 1s3p<sup>1</sup>P<sub>1</sub>+

  1s<sup>21</sup>S<sub>0</sub> line of multicharged helium-like ions in a laser plasma.

  OIS, v. 52, no. 2, 1982, 376-378.
- 814. Breyev, V.V., L.A. Knizhnikova, and A.F. Nastoyashchiy (23).

  Steady-state theory on optical strata. KE, no. 2, 1982, 274-284.
- 815. Bufetov, I.A., A.M. Prokhorov, V.B. Fedorov, and V.K. Fomin (1).

  Hydrodynamic interaction of slow-heating optical discharges and its

  use for diagnostics of gas motion in a discharge. ZhETF P, v. 35,
  no. 4, 1982, 167-169.
- 816. Burtsev, V.A., V.A. Gribkov, and T.I. Filippova (0). <u>High-temperature</u>

  <u>pinch formations</u>. Itogi nauki i tekhniki. VINITI. Fizika plazmy,
  no. 2, 1981, 80-137. (RZhF, 2/82, 2G168)
- 817. Bychenkov, V.Yu., A.A. Zozulya, V.P. Silin, and V.T. Tikhonchuk (1).

  Theory on half-integer harmonic generation in a spatially inhomogeneous laser plasma. Fizicheskiy institut AN SSSR. Preprint, no.

  36, 1981, 19 p. (RZhF, 1/82, 1G267)
- 818. Bychenkov, V.Yu., A.A. Zozulya, V.P. Silin, and V.T. Tikhonchuk (0).

  Theory of half-integer harmonics generation in inhomogeneous laserproduced plasmas. Sb 11, F6. (RZhF, 2/82, 2G299)
- 819. Draganescu, V., M. Isbasescu, E. Udrea, and V.G. Velculescu (NS).

  Simple model for the plasma mirror laser. RRP, no. 6, 1981, 573-576.

  (RZhF, 2/82, 2D1650)

- 820. Galichiy, A.A., Yu.A. Mikhaylov, G.V. Sklizkov, Yu.V. Sopkin, S.I. Fedotov, and V.A. Tsitovich (1). Forming microapertures in an x-ray camera obscura by focused laser radiation. Fizicheskiy institut

  AN SSSR. Preprint, no. 120, 1981, 15 p. (RZhF, 1/82, 1G270)
- 821. Gamaliy, Ye.G., I.G. Lebo, and V.B. Rozanov (0). Generation of spontaneous magnetic fields at laser plasma compression. Sb 11, F20. (RZhF, 2/82, 2G291)
- 822. Gamaliy, Ye.G., A.I. Isakov, I.D. Mash, V.B. Rozanov, and S.A. Startsev (1). Energy absorption of fast electrons in a laser plasma. Analytical results. Tr 11, 66-72.
- 823. Gamaliy, Ye.G., V.B. Rozanov, A.A. Samarskiy, V.F. Tishkin, N.N.

  Tyurina, and A.P. Favorskiy (1). Hydrodynamic stability in the

  compression of spherical laser targets. Tr 11, 73-83.
- 824. Gamaliy, Ye.G., V.A. Gasilov, I.G. Lebo, and V.B. Rozanov (1).

  Generation of spontaneous magnetic fields due to Rayleigh-Taylor instability in spherical laser targets. Tr 11, 84-97.
- 825. Gorbunov, V.A., A.A. Kalmykov, A.I. Petrukhin, Yu.Ye. Pleshanov, V.A. Pushtarik, and V.A. Rybakov (276). Magnetic field generation by a laser flare plasma at low flux densities. KE, no. 1, 1982, 130-134.
- 826. Gurevich, A.V., and A.P. Meshcherkin (0). <u>Ion acceleration under</u>

  <u>laser plasma expansion</u>. Sb 11, F7. (RZhF, 2/82, 2G323)
- 827. Gus'kov, S.Yu., and V.B. Rozanov (1). <u>Kinetics of thermonuclear</u>
  particles in a laser plasma. Tr 11, 115-152.

- 828. Gus'kov, S.Yu., and V.B. Rozanov (1). Thermonuclear combustion wave

  in a laser plasma. Tr 11, 153-166.
- 829. Kalmykov, Yu.K., A.V. Komin, M.V. Krivosheyev, D.V. Yefremov, and V.B. Rozanov (0). Parametric analysis of a power plant based on laser fusion. Sb 11, G13. (RZhF, 2/82, 2G304)
- 830. Karpov, O.V., V.S. Mamaykin, N.G. Nurullayev, and G.D. Petrov (0).

  Optical spark in two-phase media from short laser pulses. ZhPS,
  v. 36, no. 1, 1982, 22-26.
- 831. Kologrivov, A.A., G.V. Sklizkov, and A.S. Shikanov (1).

  Reconstructing the continuous x-ray spectrum of a laser plasma

  according to its attenuation curve. Fizicheskiy institut AN SSSR.

  Preprint, no. 142, 1981, 43 p. (RZhF, 1/82, 1G186)
- 832. Korukhov, V.V. (159). Experimental determination of the wavelength of the 1s3p<sup>3</sup>P<sub>1</sub> 1s3d<sup>1</sup>D<sub>2</sub> triplet-singlet transition of a helium-like oxygen ion in a laser plasma. Sb 2, 98-101.
- 833. Kuznetsov, E.I. (0). Session of the Scientific Council on the

  Comprehensive Problem of Plasma Physics, Academy of Sciences, USSR,

  Zvenigorod, April 1981. Atomnaya energiya, v. 51, no. 4, 1981,

  279-281. (RZhF, 2/82, 2G2)
- 834. Mazing, M.A., and A.P. Shevel'ko (0). Study on elementary processes of multicharged ions according to their x-ray spectra in a laser plasma. Sb 23, 185-188.

- 835. Nemchinov, I.V., M.P. Popova, and L.P. Shubadeyeva (276). Effect of plasma motion on the propagation of supersonic radiation waves. KE, no. 2, 1982, 436-438.
- 836. Novopashin, S.A., and M.R. Predtechenskiy (159). <u>Gasdynamic</u> phenomena in laser plasma disintegration. Sb 2, 94-97.
- 837. Petrzilka, V.A. (NS). <u>Radiation forces in a dissipative plasma</u>.

  CJP, v. B31, no. 8, 1981, 885-887. (RZhF, 1/82, 1G49)
- 838. Rabinovich, M.S. (0). Experimental studies on stellarators.

  Itogi nauki i tekhniki. VINITI. Fizika plazmy, no. 2, 1981, 6-79.

  (RZhF, 1/82, 1G162)
- 839. Silin, V.P., and V.T. Tikhonchuk (1). Parametric turbulence and

  Cerenkov heating of electrons in a spatially inhomogeneous plasma.

  Fizicheskiy institut AN SSSR. Preprint, no. 139, 1981, 29 p.

  (RZhF, 1/82, 1660)
- 840. Witkowski, S., and K.L. Kompa (NS). Application of high-power lasers.

  CCF, v. A31, no. 4, 1981, 344-359. (RZhF, 1/82, 1D1580)
- 841. Wolowski, J., E. Woryna, S. Denus, A.A. Yerokhin, Yu.A. Zakharenkov, W. Mroz, G.V. Sklizkov, J. Farny, and A.S. Shikanov (1) (Russ transliteration of Polish: Ye. Volovski, E. Voryna, V. Mroz, Yu. Farny).

  Thomson mass spectrograph for studying a laser plasma. ZhTF, no. 2, 1982, 366-373.

- 842. Volchinskaya, M.I., V.I. Mazhukin, G.Ye. Repina, and B.N.

  Chetverushkin (0). Numerical modeling of a two-dimensional problem on plasma discharge propagation. ZhVMMF, no. 1, 1982, 171-177.
- 843. Yan'kov, V.V. (23). Consequences of Langmuir collapse in a laser corona. Fizika plazmy, no. 1, 1982, 86-91.
- 844. Yerokhin, N.S., S.S. Moiseyev, V.V. Mukhin, V.Ye. Novikov, and R.Z. Sagdeyev (0). Anomalies of laser beam penetration and absorption in a nonuniform plasma above its critical value. Sb 11, Fl. (RZhF, 2/82, 2G302)
- 845. Zakharenkov, Yu.A., G.V. Sklizkov, and A.S. Shikanov (1). Study on the dynamics of a plasma corona. Fizicheskiy institut AN SSSR.

  Preprint, no. 126, 1981, 27 p. (RZhF, 1/82, 1G185)
- 846. Zozulya, A.A., and V.P. Silin (1). Raman scattering in a laser

  plasma. Fizicheskiy institut AN SSSR. Preprint, no. 122, 24 p.

  (RZhF, 2/82, 2G44)
- 847. Zozulya, A.A., and V.P. Silin (1). Effect of focusing and converging lenses on the Raman harmonic spectra in a laser plasma. Fizicheskiy institut AN SSSR. Preprint, no. 188, 1981, 41 p. (RZhF, 2/82, 2D1646)

# III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS

- 848. Ageyev, N.V. (0). Issledovaniye i razrabotka materialov dlya reaktorov termoyadernogo sinteza (Research and development of materials for fusion reactors). Moskva, Nauka, 183 p. (RZhF, 2/82, 2G329)
- 849. Andreyeva, M.A., and R.N. Kuz'min (2). Mesabauerovskaya gamma-optika

  (Mössbauer gamma optics). Moskovskiy universitet. Moskva, 1982,

  282 p.
- 850. Avtomatizatsiya fizicheskogo eksperimenta (Automation of physics
  experiments). Edited by V.M. Kolobashkin (16). Moskva, Energoizdat,
  1981, 119 p. (RZhF, 1/82, 1A256)
- 851. Bel'skiy, A.M., T.M. Korneychik, and A.P. Khapalyuk (87).

  Prostranstvennaya struktura lazernogo izlucheniya (Spatial structure) of laser radiation). Belorusskiy GU. Minsk, 1982, 200 p.
- 852. Bobrov, A.V., and Z.M. Muldakhmetov (0). Spektroskopiya kombinatsionnogo rasseyaniya sveta (Raman spectroscopy).

  Alma-Ata, Nauka, 1981, 151 p. (RZhF, 2/82, 2D542)
- 853. Demchuk, M.I., and M.A. Ivanov (87). Statisticheskiy odnokvantovyy metod v optiko-fizicheskom eksperimente (Single-quantum statistical method in optophysics experiments). Belorusskiy universitet. Minsk, 1981, 176 p. (RZhF, 1/82, 1D1009)

- 854. Elementy teorii svetorasseyaniya i opticheskaya lokatsiya (Elements in the theory of light scattering and optical ranging). Edited by V.M. Orlov (78). Institut optiki atmosfery SOAN. Novosibirsk, Nauka, 1982, 225 p.
- 855. Tenth European Conference on Controlled Fusion and Plasma Ph, sics,

  Moscow, 14-19 Sep 1981. Vol. 1. Contributed papers. (Whole book in

  English but includes Russian title: X Yevropeyskaya konferentsiya

  po upravlyayemomu sintezu i fizike plazmy, Moskva, 14-19 sentyabrya

  1981. Trudy, tom 1. Original'nyye doklady). Moskva, 1981,

  variable pagination. (RZhF, 2/82, 2G1)
- 856. Fizicheskiye metody issledovaniya metallov (Physical methods for studying metals). Edited by V.T. Cherepin (0). Kiyev, Naukova dumka, 1981, 224 p. (RZhF, 1/82, 1Ye8)
- 857. Fizicheskiye protsessy v priborakh elektronnoy i lazernoy tekhniki

  (Physical processes in instruments of electronic and laser technology).

  Moskovskiy fiziko-tekhnicheskiy institut. Mezhduvedomskiy sbornik.

  Edited by B.V. Bondarenko (118), et al. Moskva, 1981, 121 p.

  (KL, 8/82, 6594)
- 858. Funtov, N.M., Yu.A. Baloshin, and N.Ye. Aver'yanov (30). Raschet energeticheskikh parametrov lazerov (Analyzing the energy parameters of lasers). Leningradskiy institut tochnoy mekhaniki i optiki. Leningrad, 1981, 55 p. (KL, 3/82, 2138)

- 859. 15th International Conference on Phenomena in Ionized Gases, Minsk,
  14-18 July 1981. Proceedings. Contributed Papers. (Whole book in
  English but includes Russian title: XV Mezhdunarodnaya konferentsiya
  po yavleniyam v ionizovannykh gazakh, Minsk, 15-18 iyulya 1981.
  Trudy. Doklady). Place and year of publication not given.
  Part 1, 528 p. Part 2, 531-1048 p. (RZhF, 2/82, 2G3,4)
- 860. Inversnaya zaselennost' i generatsiya na perekhodakh v atomakh i molekulakh. X Sibirskoye soveshchaniye po spektroskopii, Tomsk, 16-18 sentryabrya 1981. Tezisy doklady (Population inversion and lasing at transitions in atoms and molecules. Tenth Siberian Conference on Spectroscopy, Tomsk, 16-18 Sep 1981. Summaries of the reports). Tomskiy universitet (132). Tomsk, 1981, 302 p. (RZhF, 1/82, 1D1311)
- 861. Izmereniya optiko-meteorologicheskikh parametrov atmosfery s ispol'zovaniyem lazernogo izlucheniya (Measuring the optometeoro-logical parameters of the atmosphere by laser radiation). Edited by M.V. Kabanov (78). Institut optiki atmosfery SOAN. Tomsk, 1980, 167 p. (Cited in UFN, v. 136, no. 2, 1982, 369)
- 862. Kachmarek, F. (Russ transliteration of Kaczmarek, F.). Vvedeniye v fiziku lazerov (Introduction to the physics of lasers). Translated from the Polish. Edited by M.F. Bukhenskiy (0). Moskva, Mir, 1981, 540 p. (KL, 1/82, 361)
- 863. Khanokh, B.Yu. (87). Opticheskiye otrazhateli tetraedricheskogo tipa v aktivnykh sistemakh (Optical corner reflectors in active systems).

  Belorusskiy GU. Minsk, 1982, 160 p.

- 864. Khimicheskiye lazery (Chemical lasers). Authors listed on inside page: A.S. Bashkin, V.I. Igoshin, A.N. Orayevskiy, and V.A. Shcheglov (0). Edited by N.G. Basov (0). Moskva, Nauka, 1982, 400 p.
- 865. Krekov, G.M., and R.F. Rakhimov (78). Optiko-lokatsionnaya model' kontinental'r 30 aerozolya (Optical ranging model of a continental aerosol). Ldited by S.D. Tvorogov (78). Institut optiki atmosfery SOAN. Novosibirsk, Nauka, 1982, 200 p.
- 866. Lazery v aviatsii (Lasers in aviation). Authors listed on inside page: I.N. Goncharov, V.N. Dezhin, V.P. Kutakhov, A.V. Petukhov, V.M. Sidorin, and I.M. Sukhar' (0). Edited by V.M. Sidorin.

  Moskva, Voyenizdat, 1982, 160 p.
- 867. Lazer v lechenii ran (Lasers in the treatment of wounds). Edited by V.N. Koshelev (45,596). Saratovskiy GU. Saratovskiy meditsinskiy institut. Saratov, 1980, 125 p. (Cited in Klinicheskaya khirurgiya, no. 2, 1982, 58-59)
- 868. Metody i ustroystva formirovaniya i obrabetki radiosignalov (Methods and devices for shaping and processing radio signals). Moskovskiy energeticheskiy institut. Trudy, no. 522, 1981, 3-113. (RZhF, 1/82, 1Zh67)

- 869. Metrologiya v radioelektronike. V Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya, 22-24 sentryabrya 1981. Tezisy dokladov (Metrology in radioelectronics. Fifth All-Union Scientific and Technical Conference, 22-24 Sep 1981. Summaries of the reports). Edited by A.I. Mekhannikov (140). VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Moskva, 1981, 315 p. (RZhF, 1/82, 1Zh3)
- 870. Mirkin, L.I., Ye.P. Smyslova, and Ye.F. Smyslov (2). Struktura i svoystva metallov posle impul'snykh vozdeystviy (Structure and properties of metals after pulsed actions). Moskovskiy GU. Moskva, 1980, 168 p. (RZhF, 2/82, 2Ye1048)
- 871. Nagibina, I.M., and Yu.K. Mikhaylovskiy (0). Fotograficheskiye i fotoelektricheskiye spektral'nyye pribory i tekhnika emissionnoy spektroskopii (Photographic and photoelectric spectral instruments and technology of emission spectroscopy). Leningrad, Mashinostroveniye, 1981, 192 p. (RZhF, 2/82, 2A38)
- 872. VI Nauchnaya konferentsiya fakul'teta fizicheskoy i kvantovoy elektroniki, aprel' 1981. Materialy (Sixth Scientific Conference of the Faculty of Physics and Quantum Electronics, April 1981. Papers). Moskovskiy fiziko-tekhnicheskiy institut (118). Deposit at VINITI, no. 3987-81, 10 Apr 1981, 35 p. (RZhF, 1/82, 1D1010)
- 873. Nefedov, Ye.I. (0). Otkrytyye koaksial'nyye rezonansnyye struktury

  (Open coaxial resonance structures). Moskva, Nauka, 1982, 220 p.

- 874. Neravnovesnyye i rezonansnyye protsessy v plazmennoy radiofizike

  (Nonequilibrium and resonance processes in plasma radiophysics).

  Authors listed on inside page: N.S. Yerokhin, M.V. Kuzelev, S.S.

  Moiseyev, A.A. Rukhadze, and A.B. Shvartsburg (0). Moskva, Nauka,

  272 p.
- 875. Neravnovesnyye protsessy v odno- i dvukhfaznykh sistemakh

  (Nonequilibrium processes in single- and two-phase systems).

  Institut teplofiziki SOAN. Sbornik nauchnykh trudov. Edited by

  A.K. Rebrov (159). Novosibirsk, 1981, 167 p.
- 876. Novik, A.Ye. (0). Gazorazryadnyye lazery (Gas-discharge lasers).

  Series: Massovaya biblioteka inzhenera. Elektronika, no. 30.

  Moskva, Radio i svyaz', 1982, 120 p.
- 877. Opticheskiye kvantovyye generatory: Ukazatel' otechestvennoy i inostrannoy literatury za 1979 goda (Lasers: Index of domestic and foreign literature for 1979). Compiled by Ye.P. Gridasova (3) et al. Edited by V.N. Belyy (3) et al. Institut fiziki AN BSSR. Fizicheskaya biblioteka AN BSSR. Minsk, 1980. Part 1, 683 p. Part 2, 234 p. (Cited in UFN, v. 136, no. 2, 1982, 368)
- 878. Radiofizicheskiye metody obrabotki signalov (Radiophysical methods for signal processing). Moskovskiy fiziko-tekhnicheskiy institut (118). Sbornik nauchnykh trudov. Moskva, 1981, 148 p. (RZhF, 1/82, 12h68)

- 879. Razvitiye fizicheskikh nauk v Tomskom universitete. K 100-letiyu so dnya osnovaniya 1880-1980 (Development of the physical sciences at Tomsk University. On the 100 years since the founding, 1880-1980). Edited by V.I. Gaman and M.A. Krivov (132). Tomskiy GU. Tomsk, 1981, 127 p. (RZhF, 1/82, 1A41)
- 880. Teoriya nagreva i szhatiya nizkoentropiynykh termoyadernykh misheney

  (Theory on heating and compression of low-entropy thermonuclear

  targets). Fizicheskiy institut AN SSSR. Trudy, no. 134. This issue
  edited by N.G. Basov (1). 1982, 184 p.
- 881. Tuchin, V.V. (45). Fluktuatsii v gazovykh lazerakh (Fluctuations in gas lasers). Part 2. Edited by M.L. Kats (45). Saratovskiy universitet. Saratov, 1981, 164 p. (KL, 6/82, 4965)
- 882. VIII Vsesoyuznaya konferentsiya po fizike elektronnykh i atomnykh stolknoveniy (VIII VKEAS), Leningrad, 29 sentyabrya 2 oktyabrya 1981 (Eighth Ali-Union Conference on the Physics of Electron and Atom Collisions, Leningrad, 29 Sep 2 Oct 1981). Nauchnyy sovet po kompleksnoy probleme "Fizika plazmy" AN SSSR. Fiziko-tekhnicheskiy institut AN SSSR. Leningrad, 1982, 195 p. Not to be confused with a previous publication of the same title on the same conference published in 1981.

- 883. II Vsesoyuznyy simpozium po fizike akustiko-gidrodinamicheskikh yavleniy i optoakustike, Suzdal' Vladimirskoy oblasti, 2-7 dekabrya 1979. Trudy (Second All-Union Simposium on the Physics of Hydrodynamic Phenomena and Optoacoustics, Suzdal', Vladimir Region, 3-7 December 1979. Transactions). Edited by L.M. Lyamshev, K.A. Naugol'nykh, and S.A. Rybak (21). Ob"yedinennyy nauchnyy sovet po kompleksnoy probleme "Fizicheskaya i tekhnicheskaya akustika" AN SSSR. Akusticheskiy institut AN SSSR. Moskva, 1982, 332 p.
- v atmosfere. Tezisy dokladov (Sixth All-Union Symposium on Propagation of Laser Radiation in the Atmosphere. Summaries of the reports).

  Institut optiki atmosfery SOAN (78). Tomsk, 1981. Part 1, 256 p.

  Part 2, 259 p. Part 3, 248 p. (RZhF, 1/82, 1D1242,1243,1244)
- 885. Yaroslavskiy, L.P., and N.S. Merzlyakov (201). Tsifrovaya golografiya (Digital holography). Institut problem peredachi informatsii AN SSSR. Moskva, Nauka, 1982, 224 p.
- 886. Yezhegodnik, 1979-1980. Tsentral'nyy institut fizicheskikh
  issledovaniy (Yearbook 1979-1980. Central Physics Research Institute).
  Edited by G.Yancho (Russ transliteration of G. Jancso). Hungarian
  title: Evkonyv, 1979-1980. Kozponti fizikai kutato intezet.
  Budapest, 1981, 206 p. (RZhF, 1/82, 1A42)
- 887. Zaslavskiy, G.M., V.P. Meytlis, and N.N. Filonenko (210). Vzaimodeystviye voln v neodnorodnykh sredakh (Interaction of waves in
  inhomogeneous media). Edited by V.A. Ignatchenko (210). Novosibirsk,
  Nauka, 1982, 177 p.

## IV. SOURCE ABBREVIATIONS

## (CIRC Codens)

APC	(APYCA)	Acta physica et chemica. Szeged
APH	(АРАНА)	Acta physica Academiae scientiarum hungaricae
APP	(APTLB)	Acta physica polonica
BAPS	(BAPTA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
BIPG	(BIPED)	Buletinul Institutului politehnic "Gheorge Gheorghiu-Dej". Seria electrotehnica. Bucuresti
BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
CCF	(CKCFA)	Ceskoslovensky casopis pro fyziku
CJP	(CZYPA)	Czechoslovak Journal of Physics
DAN Arm	(DANAA)	Akademiya nauk Armyanskoy SSR. Doklady
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DAN Uz	(DANUA)	Akademiya nauk Uzbekskoy SSR. Doklady
DR	(DERUB)	Deponirovannyye rukopisi
EOM	(EOBMA)	Elektronnaya obrabotka materialov
ETP	(EXPPA)	Experimentelle Technik der Physik
FA10	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FGiV	(FGVZA)	Fizika goreniya i vzryva
FiKhOM	(PKOMA)	Fizika i khimiya obrabotki materialov
FiKhS	(FKSTD)	Fizika i khimiya stekla
FM	(FNMKA)	Pinommechanika, mikrotechnika [Hungary]
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Est	(ETFMB)	Akademiya nauk Estonskoy SSR. Izvetsiya. Fizika, matematika

IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya Seriya fizicheskaya
IAN M	(IZFMB)	Akademiya nauk Moldavskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk
IAN Uz	(IUZFA)	Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
I-FZh	(INFZA)	Inzhenerno-fizicheskiy zhurnal
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Prioborostroyeniye
IVUZ Radioelek	etr (IVUZB)	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
<b>JMO</b>	(JMKOA)	Jemna mechanika a optika
JS	()	Journal Signalaufzeichnungsmaterialen
KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHVKA)	Khimiya vysokikh energiy
KL	(KNLTA)	Knizhnaya letopis'
KLDVAD	()	Knizhnaya letopis'. Dopolnitel'nyy vypusk. Avtoreferaty dissertatsii
Kristal	(KRISA)	Kristallografiya
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizike
NM	(AMMVI)	Akademiya nauk SSSR. Izvestiy <sup>^</sup> . Neorganicheskiye materialy
ois	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Otkr Lzobr	(OIPOB)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PSS	(PSSAB) (PSSBB)	Physica Status Solidi (A). Applied Research (B). Basic Research
PSU	(PRSUB)	Pribory i sistemy upravleniya
PTE	(PRTEA)	Pribory i tekhnika eksperimenta

RiE	(RAELA)	Radiotekhnika i elektronika
RRP	(RRPZA)	Revue roumaine de physique
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhGeod	(RZGAB)	Referativnyy zhurnal. Geodeziya i aeros"yemka
RZhRadiot	(RZRAB)	Referativnyy zhurnal Radiotekhnika
Sb1	Sbornik	Vsesoyuznyy simpozium po rasprostraneniyu lazernogo izlucheniya v atmosfere. 6th. Tezisy dokladov. Part 2. Institut optiki atmosfery SOAN. Tomsk, 1981.
Sb2		Neravnovesnyye protsessy v odno- i dvukhfaznykh sistemakh. Institut teplofiziki SOAN. Sbornik nauchnykh trudov. Novosibirsk, 1981.
Sb3		Sbornik nauchnykh trudov vuzov Litovskoy SSR. Radioelektronika, no. 3, 1981.
Sb4		Metrologiya v radioelektronike. Vsesoyuznaya nauchno- tekhnicheskaya konferentsiya. 5th. 22-24 Sep 1981. Tezisy dokladov. VNII Fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Moskva, 1981.
Sb5		Protsessy perenosa energii v parakh metallov. Latviyskiy GU. Mezhvedomstvenyy sbornik nauchnykh trudov. Riga, 1981.
Sb6		Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya: Metrologicheskiye problemy mikroelektroniki. Tezisy dokladov. Moskva, 1981.
Sb7		Vsesoyuznyy simpozium po fizike akustiko-gidrodinam- icheskikh yavleniy i optoakustike. 2nd. Suzdal' Vladimirskoy oblasti, 2-7 Dec 1979. Trudy. Moskva, 1982.
Sb8		Priyemniki prostranstvenno-vremennykh signalov na fone pomekh. Voronezh, 1981.
Sb9		Novyye elementy i metody rascheta informatsionnykh sistem. Moskva, 1980.
Sb10		Volny i difraktsiya. Vsesoyuznyy simpozium po difraktsii i rasprostraneniyu voln. 8th. Vol. 3. Kratkiye tezisy dokladov. Moskva, 1981.
Sb11		Tenth European Conference on Controlled Fusion and Plasma Physics, Moscow, 14-19 Sep 1981. Vol. 1. Contributed papers. Moskva, 1981.
Sb12		Volny i difraktsiya. Vsesoyuznyy simpozium po difraktsii i rasprostraneniyu voln. 8th. Vol. 2. Moskva, 1981.

- Sb13 Neravnovesnyye i rezonansnyye protsessy v plazmennoy radiofizike. Moskva, Nauka, 1982.
- Sbl4 Issledovaniya v oblasti spektroskopii i kvantovoy elektroniki.
  Respublikanskaya konferentsiya molodykh uchenykh po spektroskopii i kvantovoy elektronike. 5th. Palanga, 28-29 May 1981. Tezisy dokladov. Vil'nyus, 1981.
- Sb15 Vsesoyuznyy simpozium po rasprostraneniyu lazernogo izlucheniya v atmosfere. 6th. Tezisy dokladov. Part 1. Institut optiki atmosfery SOAN. Tomsk, 1981.
- Sbl6 Vsesoyuznyy simpozium po rasprostraneniyu lazernogo izlucheniya v atmosfery. 6th. Tezisy dokladov. Part 3. Institut optiki atmosfery SOAN. Tomsk, 1981.
- Sb17 Elementy teorii svetorasseyaniya i opticheskaya lokatsiya. Institut optiki atmosfery SOAN. Novosibirsk, Nauka, 1982.
- Sbl8 Tekhnicheskiye sredstva i programmnoye obespecheniye sistem avtomatizatsii nauchnykh issledovaniy v geofiziki. Polyarnyy teofizicheskiy institut Kol'skogo filiala AN SSSR. Apatity, 1982.
- Sb19 Teplofizicheskiye issledovaniya peregretykh zhidkostey. Ural'skiy nauchnyy tsentr AN SSSR. Sverdlovsk, 1981.
- Sb20 Radioelektronika letatel'nykh apparatov, no. 11, Khar'kov, 1981.
- Sb21 Elektromagnitnyye i opticheskiye yavleniya v tberdykh telakh. Baku, 1981.
- Sb22 Konferentsiya molodykh uchenik NIIF LGU. 1st. Deposit at VINITI, no. 4213-81, 1981.
- Sb23 Vsesoyuznaya konferentsiya po fizike elektronnykh i atomnykh stolknoveniy. 8th. Leningrad, 29 Sep 2 Oct 1981 (VIII VKEAS). Leningrad, 1982.
- Sb24 Vzaimodeystviye obolochek s zhidkost'yu, no. 14. Kazanskiy fizikotekhnicheskiy institut Kazanskogo filiala AN SSSR. 1981.
- Sb25 Fizicheskiye metody issledovaniya metallov. Kiyev, 1981.
- Sb26 Sovremennyye eksperimental'nyye metody issledovaniya protsessov teplomassoobmena. Mezhdunarodnaya shkola-seminar, Minsk, 1981.

  Materialy. Minsk, 1981.
- Sb27 Primeneniye nizkotemperaturnoy plazmy v khimii. Institut neftekhimicheskogo sinteza AN SSSR Moskva, 1981.
- Sb28 Acta Universitatis Palackianae Olomucensis. Facultas rerum naturalium. Physica, v. 65, 1980.
- Sb29 Fotograficheskiye materialy i khimicheskiye veshchestva dlya ikh polucheniya. Moskva, 1981.

Sb30		Voprosy kvantovoy teorii atomov i molekul, no. 2, Leningrad, 1981.
Sb31		Nauka i chelovechestvo, 1981. Moskva, 1981.
SCF	(SCEFA)	Studii si cercetari de fizica
TiEKh	(TEKHA)	Teoreticheskaya i eksperimental'naya khimiya
TKiT	(TKTEA)	Tekhnika kino i televedeniya
Trl	Trudy	Tbiliskiy universitet. Trudy, no. 216, 1980.
Tr2		Kiyevskiy politekhnicheskiy institut. Vestnik. Radioelektronika, no. 18, 1981.
Tr3		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 282, 1981.
Tr4		Moskovskiy energeticheskiy institut. Trudy, no. 519, 1981.
Tr5		Moskovskiy energeticheskiy institut. Trudy, no. 522, 1981.
Tr6		Institut prikladnoy geofiziki. Trudy, no. 41, 1982.
Tr7		Kazanskiy pedagogicheskiy institut. Uchenyye zapiski, no. 202, 1980.
Tr8		Radiotekhnicheskiy institut AN SSSR. Trudy, no. 40, 1980.
Tr9		Moskovskoye vyssheye tekhnicheskoye uchilishche. Trudy, no. 362, 1981.
Tr10		Moskovskiy energeticheskiy institut. Trudy, no. 535, 1981.
Trll		Fizicheskiy institut AN SSSR. Trudy, no. 134, 1982.
TVT	(ATYVTA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskikh nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZETFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
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ZhNKh	(ZNOKA)	Zhurnal neorganicheskoy khimii

ZhPMTF	(ZPMFA)	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEPA)	Zhurnal tekhnicheskoy fiziki
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